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This Book,
belongs
to

Household Science
Department
Univ. of Toronto



THE JOURNAL
OF
HOME ECONOMICS

PUBLISHED BY
THE AMERICAN HOME ECONOMICS ASSOCIATION

VOL. VI, 1914
COMPLETE IN FIVE NUMBERS

BALTIMORE, MD.
1914



1101570

THE
Journal of Home Economics

VOL. VI.

FEBRUARY, 1914

No. 1

SOME POSSIBILITIES IN THE WORK OF MUNICIPAL
VISITING HOUSEKEEPERS¹

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There is no longer a question as to the value of practical instruction in the home as a means towards social betterment. The standard of living in the individual home governs the standard of living in the community. This is constantly changing, and every effort that we can make to raise home conditions to a higher, healthier plane, can but react to the benefit of the group as well as the individual.

For this reason much interest has recently been shown in the idea of having a staff of visiting housekeepers supported by the city or state, and at the service of the family of average means as well as those below the poverty line, who are already being partially cared for by the visitors of the various social organizations. If developed along certain lines, such work might best be used as a form of extension teaching, and be under the direction of the department of education. My personal opinion, however, is that it would have broader, bigger possibilities if it were recognized as preventive health work and worthy of public support and development for that reason, rather than for its educational value alone. If it is established in Cleveland, it will probably be under the direction of the welfare department which we hope to have, if the proposed new charter is approved by the voters. In New York City it is still unsettled whether it should rightly be

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

carried on under the auspices of the health department or the tenement house commission. It is expected that some experimental visiting housekeeping will be tried there this year; if so, we shall soon have some data which will be of help to us in outlining the future development of this very vital kind of social work.

During the winter of 1912-1913 some experimental visiting work was carried on in Cleveland in connection with regular Y. W. C. A. teaching, in order to show what might be accomplished by a home visitor, trained in domestic science. For one day the teacher acted as a representative of the Associated Charities; on another day as a helper to the mothers of some of the Day Nursery children, emphasizing especially with them, the proper care and feeding of the children when they are at home instead of at the nursery; at another time as a helper to the Visiting Nurse Association in some of their cases where proper diet was felt to be an important part of the treatment. On another occasion charge was assumed (for the city) of a few families who had been recommended by the sanitary inspectors as being in need of assistance. This municipal work, especially, yielded some rather interesting experiences, and the value and importance of such work being carried out on a large scale by the city became more and more evident, while at the same time we became aware of the difficulties which will be encountered in establishing such work, unless it can be more definitely standardized than it is at present.

First, we shall need to make a thorough survey of the field so that we may have full knowledge of conditions and be able to judge what is possible and wise to try to accomplish. We shall need to know just how we can most successfully reach the families who need help, and just what and how to teach them. We shall need to develop a course for training women to be visiting housekeepers so that they will be able to secure the results that we have decided we want to obtain. The experience of those who have already been working along this line will be invaluable to us in further development, but one cannot help but feel that we are ready for a serious study of the possibilities of visiting housekeeping on a large scale, and that we can eventually make this exceedingly practical side of home economics as important in the social world as the more theoretical side has become in the educational world.

Shiftlessness is not as yet recognized as a disease, but it certainly carries in its train a tremendous number of ills. Why is it not worthy of more careful diagnosis and treatment? And who is so likely to

eliminate certain phases of it, as a trained visiting housekeeper? But she will have to be more than a working helper in the home, or the mere carrier of technical information. Shiftlessness may be largely due to ignorance, but the experience of social workers is that an apparently ignorant person is often not doing nearly so well as he or she knows how to do and could do if the effort were made. In order to give the necessary help in such a situation, the visiting housekeeper will need to understand the psychological, sociological, and physiological causes back of the lack of worldly success and well-being, and she will have to know how to plan and carry out a course of treatment which will bring the family up to a higher standard of individual and social efficiency.

Just how shall this work be organized? It might be suggested that one or more visiting housekeepers be placed in a district, to work from a central station which could be used for the purposes of investigation, and also, during certain hours, as a place for consultation and instruction, just as the city milk stations are now used as a place of instruction in child-feeding.

The visiting housekeeper would always be ready to give practical help and advice to anyone who requested it. At first it might be advisable for her to do routine inspection until she become thoroughly familiar with her district and its living conditions, so that she could better judge in what neighborhoods and with what families it would be most worth while to work. Besides working in coöperation with the other branches of the city health department, she should keep in close touch with the social organizations of her neighborhood so that she would know what else was being done for any family in whom she was especially interested, and also so that her type of specially trained services could be understood and called for wherever there was need. One can look forward to the time when a family not living according to suitable standards, will be reported to the visiting housekeeper, just as now a case of illness is reported to the visiting nurse and a case of destitution is reported to the charity organization society.

An objection often made to the suggestion of having visiting housekeepers, is that they will intrude on the privacy of the home, and interfere with the family life so that their visits will be resented by the family. Such may be the case when the visitor is without tact and judgment, and lacks the necessary training to make her quick in suggesting a method of treatment that will remove the wrong

condition which she has criticized. With the majority of families co-operation is easily secured if one can prove to them that the instruction will be worth while financially, socially, or physically. There are of course certain families whose coöperation it will be impossible to obtain, and yet whose present method of living does the most ultimate harm to the community. On the principle that any kind of a home is better for the children than any institution, we hesitate to break up these homes even though we know that they ought not to exist. Most of us, no doubt, can form a mental picture of this type of home. It has been suggested that a probation system be established for such a family so that they would be legally under the care of a visiting housekeeper. It would be difficult to say just how much she would be able to do with these delinquent parents, but it would certainly be an interesting problem to try to solve. Such coercion would probably not often be necessary, but it would seem that, if a family proves unwilling to accept the services of a visiting housekeeper, we should wait until there is legal sanction before we enter a home and try to assume control. Most often, judging from personal experience and the experience of others, the family will be glad to welcome assistance, just as we ourselves grasp at any opportunity to learn how to simplify our living conditions.

Let us consider the training which a woman will need before she can be worthy to call herself a "visiting housekeeper," or a "visiting home-maker." First of all, she will require a large fund of technical information. She will need to have thoroughly grasped the theories and ideals which we have set before us in the study of the household arts, and then she must eliminate all that is not absolutely essential to their application. If ever a woman needs to make thorough motion studies of the ordinary household processes, it is she who is to teach them in the home of a busy woman where much must be quickly taught in the simplest, most elementary way. It is the exceptional mother who will try to repeat anything which has seemed complicated and difficult at the time when it was taught. We shall have to reduce our cooking and housekeeping methods to a minimum of labor and expense before they will be really practical for this kind of work. Much has already been done, but there is still opportunity for valuable research which would mean much to many families.

The visiting housekeeper, then, must be a domestic science expert versed in "The Art of Right Living," and hers will have to be

an all-round course in home-making, rather than one on which the emphasis is placed on any one subject. She will have to know about the sanitary care of the house, the essentials in personal and sex hygiene, the proper care and feeding of the family, the wisest use of the family income, the easiest way to keep household accounts, the right way to launder, how to market and how to take care of the food when it is purchased, the hygienic choice and care of clothing, and the simple schemes for attractive house decoration. She must know how to show a family the way to get as much fresh air as possible into a house, and how to make the family want fresh air and enjoy it. She must be ready to teach the proper use and care of the plumbing, and she will have to know whether the plumbing has been installed according to law, or whether there are defects which can be reported and remedied. While inspection will be a minor phase of her work, still she should be quick to notice any violations of the city sanitary code, and should see that legal standards are observed.

As was said at the beginning, a visiting housekeeper will need to be more than the mere carrier of technical information. When she has proved herself to be a true friend of her families by helping them to live better, happier lives, she will find that she has come to have a remarkable influence with them, and that they will look to her for information and advice on many subjects outside her own line. For this reason, our ideal visiting housekeeper will need to have a broad social training so that she will know how to develop the kind of all-round men and women whom we want for citizens. This she may help to do by interesting them in the various educational and recreational opportunities which are so often neither understood nor appreciated by them.

Her work is not intended to take the place of other social and educational work already being done, but will be most valuable as it supplements it and brings it closer to the individual families who are in need of it, and whom such agencies are trying to reach.

Considering it from the home economics standpoint, no doubt all will agree that it will help to put the knowledge which we possess into practical application with a resulting beneficial effect on the health and standards of living of both the present and the future generations. It cannot be too strongly urged that we use all our influence to bring home economics into the homes of both city and country through the agency of field-workers trained to be truly helpful home-makers.

VISITING HOUSEKEEPING WORK IN DETROIT¹

MRS. BESSIE BISHOP BOTHWELL

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The work of the Visiting Housekeeper in Detroit was started as an experiment on January 1, 1913, by the Central District Advisory Committee of the Associated Charities. The funds were solicited in small amounts from societies and individuals, in order that as large a number as possible might be interested in the work.

It took some time for the social workers to learn to use the housekeeper's services and for the first few weeks the work was very much hampered by the fewness of the cases referred to it. At the end of the first six months we find that the work is really far heavier than one person can possibly manage, and already definite plans have been made to enlarge it in the very near future.

We found at the outset that the referring of cases to the Visiting Housekeeper, by the different coöperating organizations, made it possible for her to gain a friendly entrance into the families. Perhaps the most valuable were the introductions given through our nurses and social workers, for they had already been of true help to the family in question; therefore, when they suggested to a mother that she allow some one else to come in and help her in the matter of diet and home-making, the Visiting Housekeeper found that the way had already been paved, and she was sure of a more hearty reception than otherwise would have been accorded her.

Of the 96 cases covered in the last six months' work, the largest number, 38, were sent by the Babies' Milk Fund, whose promoters were the first to recognize the value of the work and to find that interest in the child's welfare does not end when the child has reached its second birthday; but that the diet is as essential to the growing child as is to the baby the scientific milk formula, which has been ordered by the doctor and carefully prepared under the supervision of the nurse. Therefore a large part of the Visiting Housekeeper's duties has been to teach the mother how to prepare proper foods for the growing child, and what she should feed the older children. The doctor of the Franklin Street Settlement recently reported an improved condition of a little baby, with tendency to "rickets," who was referred to us

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

by the baby's nurse, with the request that we show the mother how to prepare certain articles of diet, which the doctor had ordered, to supplement the milk formula.

We find among many of our foreign families that the baby is weaned from a bottle of milk to a bottle of black coffee, and the overcoming of this custom, which has possibly been that of many generations, is a matter which takes not only tact, but time and perseverance. Many of our mothers know absolutely nothing of the value of cereals, vegetables, and milk for their growing little ones, and in some cases the children live on bread and coffee or on bakery goods.

One of my favorite cases is typical of a large class that has great need for just the kind of help we try to give: The little woman is only twenty-seven and the mother of five children. After a miserable girlhood, with a drunken father, and three years in factory life, she married at the age of seventeen. Her husband is not strong and often loses his wages, \$2 a day, through sickness. She was delighted to have some-one teach her to make bread, biscuits and muffins and to use dried peas, beans and cereals. When our work with her began her children were so thin and frail that they were pathetic, but under a wholesome diet they are gaining in weight and strength. This mother, after several visits from the Visiting Housekeeper, expressed her appreciation of the fact that the children were gaining under the new diet, by saying: "It was not that I was not willing to buy the things for the children, only nobody had ever told me what were the best things for me to buy." Here we have the opportunity to help a mother by carefully planning with her the use of a limited income. This family has probably shown greater improvement than any other for the reason that the mother is an intelligent woman, though formerly untaught. The starting point was a desire to learn how to make bread, and many other issues have developed from this breadmaking lesson, until we feel that the general condition of the family is decidedly better.

Again, cases come to us by direct appeal. A man recently asked that his motherless children be placed in an institution. We persuaded him to take light housekeeping rooms in the house of a good, motherly woman. Twice a week after school, the oldest, a girl of fourteen, is given lessons in home-making for her father and brother, thus preserving the family life.

Cases come, too, from the Visiting Nurses' Association. A typical one was that of a little Polish girl of twelve years, whom we in-

structed in cooking and in caring for her father and five children, while her mother was confined to her bed.

One of our families we found paying for two "light housekeeping" rooms in a dirty and forlorn house. The mother, shiftless in the extreme, had no interest whatever in the condition of her home. We found the man drinking and contributing very little to the support of his family, and learned that their household possessions were in storage, held for nonpayment of charges. This time we took the man into our confidence and promised to find a new home for the family and to see that his wife kept the home in a better condition if he would in return work steadily and do for his family as he should. We found a good little six-room cottage and helped the mother to clean it. We got the furniture out of storage and put the house in good order. During the five months which have elapsed, the man has been working steadily and taking care of his family and things in general have been running more smoothly.

Another family was referred to us by one of our visitors because of its general shiftlessness which had brought it into debt and other difficulties. In this case the man paid over all his wages each week to the Associated Charities, and from this sum the groceries, etc., were bought. The meals were planned by the Visiting Housekeeper. At the end of three months we found the family almost completely out of debt and the mother managing her own buying and keeping her living expenses within the amount which the Visiting Housekeeper allowed. This was a valuable lesson in economy to a shiftless woman, and a lesson which she will not soon forget.

Another interesting case, referred to us by a church visitor, was that of a Syrian woman who wished to learn to make American bread. She so far appreciated the lessons and the spirit of the work that she expressed her gratitude by asking if she might act as interpreter for the Visiting Housekeeper whenever there should be need for such service.

While there is much indifference to be met in many of the homes, we can but feel encouraged with the many cases where improvement is noted, and with the general feeling of friendliness that one finds on all sides. Even a woman who seemed to the local visitor to be the most hopeless of home-makers has come to the office to ask for the help of the Visiting Housekeeper. This woman was referred to the Visiting Housekeeper by the Juvenile Court. There were nine children in the family, and the mother was shiftless and lazy as well as poor.

The home was so badly kept that the children were constantly sent home from school on account of their filthy condition. A scrub woman cleaned them up thoroughly and gave the family a fresh start. In a week they were as dirty as ever and one of the girls was sent home from school with word from the teacher that "she needed a bath." "Indeed!" said her mother, "and Lillian will have no bath. Didn't I give her one last winter and she had pneumonia and it cost me \$4? She will have no bath until warm weather." And not until her three girls had been removed from the home for three months, with a threat of permanent removal if the home was not improved, did she become meek enough to accept instruction. Now they have started to buy a new house and are in many ways making great efforts to improve conditions so that the children will be allowed to return.

Personal hygiene plays a large part in the work of a Visiting Housekeeper, and many little helps and suggestions can be given, which are sometimes grasped by the mother, and again by the older children in the family. One little girl, after her mother had been shown how to shampoo her hair (and she enjoyed the process), naively remarked that she had had "a bath in the tub once," and thought it a great event. The following week she was taken over to our dispensary, bringing her own clean clothes, and was given a thorough bath, shampoo, etc. The father and mother were so pleased with her general appearance that the baths can no longer be counted on the fingers of one hand.

In the original plan, we did not outline any class work, feeling that the ground could be covered to better advantage in the homes; but we have found that more efficient work can be done by a combination of class and home work, and our classes are beginning to be a large part of our plan.

One of the specially interesting features of this class work is our Hungarian Mothers' Class, which was originally established by the Babies' Milk Fund at the Solvay Guild Hall in Delray, a district largely Hungarian, where most of the work must be conducted through an interpreter. This class has suffered many vicissitudes. As the mothers bring their little ones, the attendance varies greatly. Of late the mothers have taken a much more lively interest and frequently ask a week or two ahead if the Visiting Housekeeper will show them how to prepare a certain food the next time. These meetings are of a very informal nature and seem to foster a good neighborhood spirit. The coöperation of the Baby Nurse, who is ever ready to lend her able assistance, is of vital importance. Her demonstration of the proper

method of bathing a baby created as great an interest in the class as was created by the cooking demonstration, if not greater. We frequently talk to these mothers concerning the care of garbage, preventing of flies in the house, and other topics of sanitation, while the meetings are given a social aspect by serving afternoon tea and the dish which has been cooked by the Visiting Housekeeper, recipes having been previously typewritten in Hungarian.

On the fifth of March we started our first Girls' Cooking class in our newly established Domestic Science Kitchen in the Associated Charities offices at Delray. It was attended by five of the older girls from the families under the care of the Visiting Housekeeper. Improved neighborhood life has manifested itself here by requests from the girls for permission to bring their friends who live next door or across the street, until now we have 36 girls enrolled in this one locality, and are holding three classes a week, ranging from ten to fourteen girls each, the number being limited by the size of our kitchen. The work in these classes differs from general public school work in several particulars. We do not have all the individual equipment which is used in public schools, choosing rather a good sized gas range and such cooking utensils as the girls would be likely to have in their own homes. The recipes are not for individual work but for quantities suitable for the average family, and always take into consideration economy and food value. The children work in groups of two or four and are allowed to take home the finished product.

The question is frequently asked, "Why have this cooking class, when the same work is covered by our Public Schools?" The cooking lessons of the Public Schools begin in the A 6th grade, and thorough investigation has shown that many of our children are taken from school at fourteen and put to work without ever having reached this grade, which means they have never had the instruction we give. One very interesting experience in this work was a visit from one of our special teachers of deficient children. Out of one class of thirteen girls she recognized six as deficient children who had been pupils of hers. One of our ablest pupils had been with her in the 3d grade for three years and there was little hope of her being promoted, yet all her work with us had been so excellent that we had never discovered her deficiency. Frequently the children bring us some article of food that they have made at home by one of our recipes, and we find that, in nine cases out of ten, the dish made in the class is repeated

in the home. Many times we can reach the parents through the children, but if the older people cannot be reached, we have at least "sown the seed" in the rising generation and are sure that it will bring forth some fruit.

Classes are taught by volunteer students from the domestic science department of the Thomas Normal Training School, whose directors are always ready to furnish us assistance in our work.

As no financial aid is given by the Visiting Housekeeper, the co-operation of other societies and individuals is necessary; and very frequently situations have been relieved, at our suggestion, by the material aid of the Associated Charities, the Babies' Milk Fund, the Poor Commission, church organizations, and philanthropic societies, as well as by private individuals who are either interested in the work generally, or in some particular family.

In the month of May, 176 lessons were given and 42 other visits made in contrast to the 6 lessons and 51 calls in January, the first month of our work. Judging from such an increase, there is need for more systematic and organized effort in this line. An interesting feature of this work is that the family as a whole is considered, while in much other work of a similar character it must of necessity be the individual that is the center of interest.

In classifying the calls from our coöperating agencies, we find they are of several types. The educational side where definite instruction is asked for; emergency work, as in case of sickness; and the general reconstruction of the home conditions. These are so often completely interrelated that they can be profitably carried on together.

Perhaps in no city in the country are the problems the same as those in Detroit. The unprecedented growth of the city, the doubling of its population in the past seven years, the hordes of foreigners arriving with the starting of each new automobile factory, all complicate our social problems. The housing problem alone is a matter of great anxiety. We are just beginning to realize that we have outgrown ourselves and that work must be done in a larger way. The scope of the work is unlimited, and a glance into the future, however vague and visionary in many of its aspects, points to a time when this work can be made to reach every need of the home, and all housekeepers will welcome the thought that in their hour of need they may turn for effectual help to a staff of scientifically trained Visiting Housekeepers.

TEACHING THE PREPARATION OF MEALS IN REGULAR CLASS WORK¹

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Buffalo, N. Y.

The circumstance which made this work a necessity was the opening of an open air class in a regular school in November, 1910. The work, instead of being modeled and equipped on lines meeting the need of a different city under different circumstances, was simply opened with a room, a teacher and three children. A Domestic Science teacher was appointed, whose duties were to include planning and supervising the preparation of all food materials used in the open air class; and this phase of the special work was to be an important and vital one.

Our first meal was prepared in the teachers' dressing-room and consisted of cream of tomato soup and bread and butter and was served to the children in their class room. The dishes and silver were borrowed and drawing paper was used for a table cloth. From such a beginning by gradual development and with most helpful assistance from the Director of Domestic Science, we concluded our first year in a properly equipped, bright, and cheerful combination dining-room and kitchen, where each day twenty children were served two lunches and one dinner. Because of this combination form, our room did not lend itself to the ordinary equipment. In its place we had four kitchen tables, three dining-room tables, nine non-extension tables, chairs, cabinets, stove and sink. The cabinet devoted to china and glass was placed in the dining-room space; the one for kitchen utensils, supplies, and often-used equipment was near the stove and sink. The stove was a six burner, double oven type, affording sufficient space for the work. The room was made very attractive by the addition of a few plants or ferns, a picture or two and plenty of sunshine.

When the work became well organized, provision was made for classes. The usual procedure for organization could not be carried out, except for afternoon classes, because there was work to be done at once and that work was the preparation of a meal for twenty children. The ideals and aims of the work were those of the prescribed

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

course but the amount of actual class work was decreased. The uniforms appeared at the second or third lesson; the care of the kitchen utensils and the housekeeping all grew out of careful supervision and most willing attitude on the part of the girls. For the first month the menus were simple—Hamburg loaf, mashed potatoes, boiled carrots, bread and butter, and stewed prunes. The lesson plan resolved itself into a work plan. The longer processes were begun and sometimes finished, or if there was a long cooking period, the shorter processes, such as setting the tables or spreading the bread and butter (always done for the children in order to save expense and time), were finished in the interval. General principles and rules were made plain by class discussion. The dining-room tables were used as desks and when the class was of the eighth or ninth grade, the note-book work was the same as that required of pupils in the regular classes. In such cases the lesson of the day was presented simply and concisely and the work thoroughly discussed while the food material was being prepared. Sometimes this was done with one group and sometimes with two, while a third group was preparing the dinner. The groups took turns in the kind of work they did.

The fireless cooker played a prominent part in these lessons. Whenever possible, the meat or pork and beans or other vegetable proteid food was placed in the cooker the night before, making less work for the class period.

Pleasing characteristics had many opportunities for development. Helpfulness, generosity, and unselfishness were constantly in demand. Personal responsibilities were easily shifted especially in the house-keeping work. However, it was the rule rather than the exception to find that girls remembered their duties and were ready and willing to do the work required to leave the kitchen as neat and attractive as they found it and ready to be used as an open air children's dining-room.

The work, though perhaps not entirely satisfactory from a pedagogical standpoint, was most commendable from a home and practicable point of view, especially for younger children. The equipment was very homelike, the method of procedure familiar and the constant reviewing of methods gave homework a firm basis. The food materials were economical, the combination of food principles well balanced and so simply prepared that the children were able to carry the whole process into the home.

Some menus, typical of those served in the school follow:

Scrambled Eggs	Mashed Potatoes
Beets	Bread and Butter
<hr/>	
Beef Stew	Carrots and Potatoes
Stewed Apricots	Bread and Butter
<hr/>	
Stewed Lentils	Mashed Potatoes
Cabbage Salad	Bread and Butter

The average energy value of a meal was 1100 calories; the average cost was 10 cents per person per day.

These lessons were especially valuable to the pupils of the open air class, where the boys as well as the girls had opportunities to prepare the dinner. The work with the boys was indicative of the possibilities there are for helping family dietary. Perhaps three-fourths of these children were victims of malnutrition, and this work opened the only channel for home reformation. We were constantly sending recipes, directions for combinations of food, and names of new foods—at least foods new to them—to the homes of the children and often the boys as well as the girls would be responsible for the preparation. Work along these lines is guided very largely by the personality of the teacher; and through love, patience, and an appreciation of detail, the work finds satisfactory results. There is reiteration, constant personal attention, and detail almost unending. Until system permeates the work and the daily changes affect only the net work, the routine seems difficult. But when the work finds direct application and gratifying results and is made educational—not menial—it finds wonderful enthusiasm and surprising ability even in young children.

THE DAILY MEALS AND HOW TO PLAN THEM

EMMA S. JACOBS

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It behooves the housekeeper at all times to study conscientiously the feeding of her family and in these days of high prices the necessity for so doing is becoming urgent.

The amount of effort and calculation that must be expended in order to keep the outgo for food within reasonable limits compared with other family expenditures depends on the family income and the number of people to be fed. It is not the purpose of this article to show how in cases of great need the largest possible amount of nourishment can be obtained for a given sum, but rather to deal with the food problem as it presents itself to people of average income.

We must have enough of the essential foods for our bodies, which are living machines, if we are to be a productive people. These machines transform the energy the sun has stored in the foodstuffs into body substance, and into energy and work of various kinds. This human machine is a thinking and self-directing machine whose creative power is great, hence the food selected should be such as will meet its need with the least possible waste. The selection is not simply a matter of pleasing a capricious palate, important as is the function of the palate.

As our foodstuffs are of higher price than heretofore we must know which foods will give the most energy for the least money and which are the most economical builders. To determine this we must know the composition of the various foods, and the value of the various constituents, then we must know the relative cost of foods and the quantity needed to give the energy required to keep the body in healthy working order.

COMPOSITION OF FOODSTUFFS

Food materials are, with a few conspicuous exceptions such as sugar and salad oils, made up of many compounds, but in spite of the number and variety of these constituents it is customary to group them under five heads or divisions: Proteins, fats, carbohydrates, mineral salts, and water. To distinguish them from the food material as a whole these compounds (particularly the first three) are often called nutrients.

Protein contains nitrogen, and since nitrogen is necessary for the formation of tissues, it is frequently called the tissue-building nutrient. Foods conspicuous for a high percentage of protein are lean meats, eggs, fish, poultry, cheese, dried beans, peas, cowpeas, and lentils. Not far below these foods in percentage of protein contained are the cereals, oats, wheat, corn, and others. This statement should not be taken to mean that protein is necessarily in excess of other constituents in these foods. In meats, for example, even in those which are called lean, fat may run higher than protein; in cereals the percentage of starch is several times that of protein; and in the legumes (beans, peas, peanuts, and others) starch and often fat are high. Protein also supplies energy.

Fats contain no nitrogen, and so can not be used for tissue building, though they do assist, as each cell must have some fat. Fats are useful chiefly for fuel. Foods conspicuous as being all fat or as having a specially large percentage of fats are fat meats like bacon, or salt pork, butter, lard, nuts, cream, and peanut, olive, and cotton-seed oil.

Starch, sugar, and cellulose (the principal carbohydrates) also contain no nitrogen and are fuel foods. Cellulose escapes digestion except when very young and tender, but when digested it serves as fuel. Foods having a large percentage of starch include the cereals and some legumes. Sugar exists not only as cane and maple sugar but in honey and in small percentage in fruits. Cellulose forms the framework of all plants; although, not digested unless young, it has a most important function in that it gives bulk to the mass of digested food and stretches the muscular walls of the alimentary tract, thus promoting peristalsis; it also spreads the digested nutrients over a wider surface, thus facilitating their absorption.

Mineral salts are found in our foodstuffs, principally in the green vegetables, fruits, milk, and eggs. Some of them are needed for bone and others for tissue building; some to aid digestion; and some to maintain the alkalinity of the body's fluids. As these are important processes the articles of food which are rich in mineral salts must not be omitted from the diet.

Water is found in all foods and the characteristic flavor of the food is due to the presence of sugar, mineral salt, or essential oil which is held in suspension or solution in it.

It has been found from experience that the majority of people thrive best on a mixed diet.

From the table on page 61 it will be seen that meat, eggs, cheese, dried peas and beans, cereals, nuts, and milk furnish most of the pro-

tein necessary for building and of these the peas, cereals and nuts are cheaper than meat and eggs. The first contain much fiber from which the protein must be digested, hence for the majority of persons the building process is slower and more difficult. For this reason the meat diet has been relied on for tissue building. The protein of milk, eggs, and cereals is particularly adapted to the building of tissue, especially after wasting disease, and these articles also contain much of the energy-making substance in the form of fat or starch.

Those who have been accustomed to eating much meat protein, which at the present day is a high priced food, must be careful if they change to a more largely vegetable protein diet to do so gradually so that the various parts of the digestive system may have time to adjust themselves to the change. It is wise to learn to substitute legumes, cereals, cheese and nuts for part of the meat if excessive.

Another important thing to consider when purchasing food is the amount of refuse or non-edible materials for which one pays. The proportion of these will often make a high priced article really a cheap one and a low priced one, expensive. Bone, fat and tough ends can be utilized but why pay for them the price of tender meat. A piece of shoulder, clod or round has little fat or bone; a piece of neck much fat and bone. A larger chicken or turkey has more meat in proportion to the bone and other refuse than a small one has. In a raw cereal one usually buys, for the same money, much more nutrient material than in a ready cooked one. In these days of fireless cookers the heat necessary to cook the cereal adds little to the cost of it. Low priced canned goods are often slack-filled cans or low quality goods. It is poor economy to buy overripe fruit simply because it is low priced. Much may have to be discarded during the process of picking over and thus the actual price be raised. This question of purchase is one which requires knowledge of values as well as close scrutiny to be sure that the full weight or measure and the quality paid for are given, but this lesson must be learned by every purchaser.

SOURCE OF ENERGY

All food nutrients, except the older cellulose, mineral salts, and water, are burned in the body, thereby yielding energy; but the amount of energy obtained from 1 ounce of fat is more than twice as great as that obtained from the same weight of either protein or carbohydrate. In order to get the benefit of the fuel foods there must be a large supply of

oxygen, hence those leading an indoor, sedentary life unless they take long walks or other out door exercise, must eat fat, starch, and sugar in moderation; but life in the open air allows us to increase the amount of these foods. Protein compounds should not be depended upon to supply energy, although they contribute to the total the body receives from its food supply.

Experience and experiment have shown that the food provided for a man of average weight supplies between 2 and 4 ounces of protein per day, and that if an average of about 3 ounces is secured by a man at moderate muscular labor he will be kept in a well nourished state. The amounts usually found in the average American diet would supply protein in about this range. When long periods of time are considered, the average amount per man per day has been found to be not far from 3 ounces.

AMOUNT OF FOOD

A normal, healthy appetite is the best guide as to the quantity of food to be eaten, but in order to determine how much to purchase and prepare, find out the sex, the age, the weight, and the work of the various individuals composing the family, and calculate the amount of energy which the food must yield.¹ Find out how much energy is stored in a unit portion of the various food materials, then combine these foods in such ways as to give a palatable meal containing the required amount of energy, taking care to have not more than 3 to 4 ounces of protein per man. If one dish gives too much, substitute one having less protein but keep the energy value as shown in the table below.

The unit for measuring this energy is the calorie. It represents the work required to raise the temperature of 1 kilogram of water 1°C. The average human body requires enough energy every hour to raise 2½ pounds (a kilogram) of water from the freezing to the boiling point or as much as would result from the burning of two-thirds of a pound of coal. More energy is required by a man at work than by a man at rest; in winter than in summer; by a tall person than a short one; and where more energy is needed the amount of fat, starch and sugar rather than proteid should be increased. A woman needs four-fifths as much as a man and children three-fourths or less, according to the age and general condition.

¹See table on page 60. Also U. S. Dept. Agr., Office Expt. Stas., Bul. 23. *The Chemical Composition of American Food Materials.*

It has been calculated that a man of average height (5 feet, 10 inches), weighing 150 pounds needs:

ACTIVITY	ENERGY	AMOUNT OF PROTEIN	
		Low	High
	<i>calories</i>	<i>ounces</i>	<i>ounces</i>
At rest	2000 to 2500	1 $\frac{3}{4}$ to 2	2 $\frac{1}{4}$ to 3
At moderate work	2500 to 3000	2 to 2 $\frac{1}{2}$	3 to 3 $\frac{1}{2}$
At hard work	3000 to 4000	2 $\frac{1}{2}$ to 3	3 $\frac{1}{2}$ to 4

The whole amount of food for the day may be eaten in one, two, three or more meals as desired, but experience has shown that the average person is kept in good physical condition on three meals a day. The amount of food may be divided equally between the three meals but usually the breakfasts and luncheons are light meals.

DISHES FOR THE MEALS

The breakfast usually consists of a cereal, a fruit, a meat relish or eggs or fish, bread, butter, and a beverage; the lunch, of a substantial dish such as a stew, a milk soup, a hash or escalloped dish, bread, butter, a beverage, and a sweet relish of some kind. Dinner consists of a clear soup, a meat or fish of some kind, one starchy vegetable, such as potato, rice, or macaroni, and a green one, as asparagus, green peas, corn, string beans, or tomatoes, a salad or dish of greens, as spinach, kale, beet tops, or chard, bread, butter, and a dessert of some kind.

If beef balls or mutton chops are served for breakfast do not serve meat for luncheon, and use either fish or chicken for dinner.

The soup for luncheon is usually a milk soup but a milk soup may be served for dinner if the meat is a very light one.

When meats rich in protein are served let the dessert be one having little protein, as for instance one of the fruit or gelatine desserts with or without cream. When the food served for breakfast and luncheon has been deficient in protein it is reasonable to use a custard dessert with a high protein meat.

Fruit jellies, pickles and condiments add to the cost of the meals but do not add materially to the energy.

Vegetables left from one meal may be made into a soup with milk,

into an escalloped dish with a sauce, or into a salad. Meat left from a meal may be mixed with an appropriate sauce and served as a char-treuse or an escalloped dish, or it may be served as a salad, or mixed with gelatine which has been flavored with herbs and meat juice, then chilled and served either as cold meat or a salad.

The usual ratio between the nutrients is one part of protein, one of fat, and three or four of sugar or starch. The fat and carbohydrate may be increased or diminished as desired but the protein can be changed only within very narrow limits.

The mineral salts cannot well be measured but if milk, cereals, and green vegetables form a conspicuous part of the diet the question regarding the amount of mineral matter need never be raised. Be sure that enough water is taken between meals to insure thorough digestion of the food and elimination of the waste.

COMPUTING THE NUTRITIVE VALUE OF THE MEALS

The nutritive value of any given diet may be computed if we know the quantity of each food eaten and its composition.

The method used in the laboratory² is rather troublesome for house-keepers, and therefore simpler methods accurate enough for such purposes have been suggested. One of these is to keep track of the number of portions of each food prepared per person per meal or per day and, from a table showing the protein and energy content per portion of a variety of foods, determine the total protein and energy supplied by all of the foods used in the period under consideration. It is a simple matter, for instance, to note the protein supplied by one or more portions of bread, one or more portions of meat, and so on, and add them together. Experts in hotels and restaurants who have to do with such things will serve portions of cooked food which vary only slightly in weight from day to day for any given food. This is much less the case in homes where portions vary within rather wide limits, but as suggested above a housewife, by a little study, can find the approximate weight per person of each food that she prepares.

² U. S. Dept. Agr., Office Expt. Stas., Circ. 46. *The Functions and Uses of Food.*

SOME RESULTS OF A STUDY OF THE FACTORS OF BREAD MAKING¹

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This study was carried on in 1912 at the University of Illinois in the research laboratory of the Household Science Department. Its object was twofold, namely, to determine the influence of certain factors upon the qualities of bread, and to collect some data and establish some facts which might serve as a basis for ultimate standardization. There are many successful methods of making good bread, but there is a distinct lack of knowledge regarding the exact reasons for success or failure. It was with the idea that certain causes might be definitely proved to give certain results that this work was undertaken.

Various processes were tested until one was established which could be depended upon to give uniform results and to give a loaf of bread which could be used as a unit of comparison. This was the process finally chosen: 1 cup (260 cubic centimeters) of water, measured at room temperature, was warmed to 42°C; $\frac{3}{4}$ of it was combined with the seasonings, 1 teaspoonful salt, 1 teaspoonful sugar, and 1 teaspoonful butter. The remaining $\frac{1}{4}$ of the liquid was used to soften the $\frac{1}{2}$ cake of compressed yeast. The yeast mixture was added to the dissolved seasonings; then 440 grams, or 3.6 cupfuls of spring wheat flour, slightly warmed, were beaten in gradually. The dough was kneaded by hand for 20 minutes, and allowed to rise at 26°C. until it exactly doubled its bulk. It was then kneaded for 5 minutes, and allowed to rise again to the same bulk. It was then made into a loaf with little kneading, and again allowed to rise until doubled in bulk in the pan. The loaf was baked in a gas range for 45 minutes. The oven temperature was 180°C. for 10 minutes, 180°-235° rising very gradually during the next 15 minutes, and 218° for the last 20 minutes. The size of the pan used was $8\frac{1}{2} \times 3\frac{1}{2} \times 3$ inches. This method required about 7 hours for completion.

After the preceding method with its results was definitely established, the subsequent experiments consisted of variations in the factors studied. The factors were as follows: 1, Liquid Factor; 2,

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

Yeast Factor; 3, Fermentation Factor; 4, Manipulation Factor; and 5, Temperature Factor. It will be seen that it was impossible to study one factor entirely separate from the others. There was, however, one main factor in each set of experiments.

The Liquid Factor. The general method of bread making already established was followed, at first, with variations *only* in the proportion of moisture. To carry out this study successfully it was found best to keep the amount of liquid constant, and vary the amount of flour.

The results obtained and the conclusions reached were these:

Soft doughs produce well shaped loaves, but small in volume and somewhat too flat on top; the texture is rather coarse, and in the case of exceedingly soft doughs the crumb is somewhat dark, tough, and clammy. Also, the bread made from a very soft dough dries out more rapidly on keeping than does one made from a rather stiff dough. Soft doughs yield larger weights of bread in proportion to the flour used than do stiff doughs; for this reason the baker finds it advantageous to use soft doughs.

Moderately stiff doughs give the most satisfactory breads. The stiffer the dough the more rounded is the top, the greater is the tendency of the loaf to crack open on the side, the finer is the texture, the whiter and drier is the crumb, and the richer is the color of the crust. Moderately stiff doughs rise more in the oven, hence yielding larger volumes of bread than do either soft or stiff doughs.

The longer the process the larger is the amount of flour required by a given amount of liquid.

The loaves, unanimously accepted as the best, were the ones containing 440 grams or 3.6 cupfuls of flour to 260 cubic centimeters, or 1 cupful of water, making the moisture 59 per cent by weight. The Washburn Crosby Milling Company use, in their test bakeries, 60 per cent by weight of moisture for this same flour.

A flour will vary somewhat from time to time in liquid requirement because of its variation in moisture content, as influenced by the temperature and humidity of the surrounding air. Flour kept over night in an incubator at 40°C. was found to have lost 2.1 per cent moisture.

The amount of flour required to give a dough of a certain consistency varies according to the kind of liquid used. Water produces a finer textured, sweeter flavored, but more inelastic bread than do any of the liquids ordinarily used for mixing. But such bread dries out more rapidly than any other.

When potato water is used the lightness and sponginess of the bread is increased to a marked degree. The use of milk, either sweet or sour, or of potato water heightens the color of the crust. The use of potato water also increases slightly the rapidity of fermentation, but the use of buttermilk increases it somewhat more. Potato water increases greatly the keeping qualities of the bread in which it is used. Milk, either sweet or sour, also increases such qualities, but to a less extent.

The Yeast Factor. At first, the influence of variation in the amount of yeast was studied. The best quality of compressed yeast obtainable was used. The conclusions reached were these:

Increase of yeast up to the amount of 6 cakes to the loaf causes increase of volume, but greater amount of yeast lessens volume. Increase of yeast up to 4 or 5 cakes, adds to the fineness of texture but a greater amount produces coarseness.

Increase in yeast causes a very gradual but constant increase in the tendency to crumble and in the pallor of the crust. An exceedingly large excess of yeast seems to cause deterioration of flavor, this deterioration being more in lack of flavor than in any unpleasant taste, provided the yeast is of good quality.

Comparison was here made with the results of some similar experiments made by Miss Ruth Wardall at the University of Illinois in 1907, in which pure yeast cultures were used. Her results were stated as follows: "The flavor of loaves containing 0.9 of a cake and 1.8 cake was very good; those containing 3.6 cakes and $7\frac{1}{4}$ cakes had no taste of yeast, as in the so-called-yeasty bread, but they lacked, entirely, any flavor of the grain, and were rather tasteless, although quite eatable." Then, in conclusion, she says, "the secret of flavor is surely not to be brought to light by the amount of yeast used." The possible explanation for the difference in results lies in the fact that in the writer's experiments the yeast was not of so pure a quality as that used by Miss Wardall. Both sets of experiments agree, however, in regard to effect upon texture and crumb, and in regard to a loss of the delicate flavor of the wheat grain when more than 3 cakes to the loaf were used.

Other conclusions, drawn from the experiments on quantities of yeast are:

The volume of a loaf is influenced by the power of the yeast to act in the oven, this power being proportional to the amount of yeast. Length of time of rising in the oven is increased by an increase in

amount of yeast. When a good quality of yeast is used an increase up to 2 cakes per loaf is to be recommended for shortening time and producing better bread, although it can not be recommended from an economic standpoint.

The next set of yeast experiments was conducted to determine the effect of the differing proportions of liquid yeast when carried over night in a sponge. Two sponges were set over night, one containing $1\frac{1}{2}$ cupfuls of active liquid potato yeast and $\frac{1}{2}$ cupful warm water; the other containing only $\frac{1}{2}$ cupful of liquid yeast and $1\frac{1}{2}$ cupfuls of water. The same amount of flour, sugar, and salt were added to each. In the morning the first sponge had risen and fallen, the second had risen more slowly and had not fallen. After being made into dough, both rose alike, baked alike, and were indistinguishable in any way. The conclusions reached were:

Yeast, if introduced in small quantity into a sponge, will multiply until it assumes a maximum concentration, and if introduced in large quantity will cause a greater immediate production of gas, but will not give a more vigorous sponge ultimately.

A small amount of yeast will give the same results as a larger amount if allowed a sufficient length of time in a sponge.

The Fermentation Factor. Variations in the regular method were made in the degree of fermentation and number of risings. As far as possible a quantity of dough was made and handled in a mass. When it was necessary to divide it, equal weights were taken for all loaves. Kneading was eliminated as far as possible, gas being let out by pressing or squeezing down the dough. The results obtained were:

Repeated fermentations, when kneading was eliminated, tended to produce fineness of texture, whiteness of crumb, and mellowness whose successive stages are technically described as *silkeness* and *pile*. *Pile* is the quality of bread which makes it possible to pull off little flakes and strips from the side. When an extremely white and silky bread was obtained the flavor was somewhat sour. It may be that the same products which cause acidity, such as is caused by lactic and acetic acids, help to mellow the gluten and produce this silkeness.

Change or letting out of gas, merely by cutting down, tended to prevent sourness by accelerating yeast growth, even though the dough was allowed to stand for a longer time.

Flavor was developed by fermentation, being first sweet and nutty, then slightly alcoholic, and finally acid.

Fineness of texture was much more dependent upon the degree of rising allowed in the pan than upon the extent of the previous risings. Even doughs which were permitted to rise and fall in the bowl stage gave fine grain on proper treatment in the pan. The degree of lightness in the previous rising seemed to make little difference in the final texture; increased fermentation in the first stages, however, tended to increase silkiness and whiteness. Underlightness in the first risings showed in the finished product in lack of mellowness and elasticity. Bread seemed better for having been allowed to reach its maximum expansion once during the process.

Bread allowed to finish its rising in the oven is undoubtedly better in texture, although more care is required in baking to give a well shaped loaf.

The Manipulation Factor. In these experiments doughs were mixed and divided into loaves of equal weight, all being controlled exactly alike, except for the time or manner of kneading.

Loaves that were given no kneading at all, but were merely cut down to let out the gas, gave equally good flavor, and a higher degree of elasticity; but kneading made the crumb whiter and more silky, the vesiculation somewhat finer, and the distribution of gas more even. This even distribution of gas also tended to make a better shaped loaf.

Increased time of kneading, after the dough had become smooth and satiny, or after 15 or 20 minutes, added considerably to the whiteness, and somewhat to the fineness of texture. The improvement however seemed by no means in proportion to the increase in labor.

When the flour was worked in very gradually with thorough kneading, the dough felt much stiffer for the same amount of flour, than when mixed rapidly and kneaded carelessly. This seemed to be due to the fact that in the more thoroughly worked doughs the flour absorbed the liquid more completely, and there was less free moisture.

More difference was observed in texture due to manner of kneading than to the time of kneading. A kneading stroke which was long and firm and even, covering all portions of the dough alike, and a rather quick stroke so that the dough was kept constantly in motion seemed to be the most effective sort.

The method of molding into the loaf had also considerable effect on texture; the loaves that were not kneaded, but were molded lightly at this point, showed more plainly the effects of handling in the early stages. In all cases the formation of a compact dough, on molding

into the loaf, resulted in a loaf of small volume and dull crust, but of fine and even texture; the loaf was, however, too compact, and lacked lightness and silkiness. The loaves which were lightly molded, without kneading, were superior in all points except in fineness and evenness of texture

The Temperature Factor. In order to determine how great was the effect upon the bread produced by the temperature of rising, doughs were raised at various temperatures. The results were as follows:

Overheating of the dough during rising results in a loaf of small volume, coarse texture, dark crumb, and dull, unattractive crust.

Chilling of bread tends to lessen its volume, and to produce compactness, coarseness, and toughness of crumb.

There is very little difference in the short process breads raised at the temperatures of 26° and 40°C . Such difference is not enough to justify the additional length of time demanded by the lower temperature.

Doughs which are thoroughly warmed during mixing and kneading are not easily chilled afterward. The later it is in the process when such chilling occurs, the less the influence on the bread. This was tested both by putting the dough into the icebox and by putting it into an open window on a winter day where the temperature registered 12°C . In such cases fermentation was well started, and the dough continued to rise steadily, although somewhat slowly, and made bread which showed no characteristics of chilling.

Variations were also made in the temperatures of baking. It was easily seen that the baking temperature must be regulated according to the degree of lightness of the dough. Too hot an oven causes an under-raised dough to crack after crusting over, thus producing holes in the crumb, while too cool an oven allows fairly well risen dough to become overlight.

Further proof of the statement already made was shown by experiment. Bread allowed to rise to the desired degree of lightness before baking, and put into a hot oven produces a better shaped loaf than if allowed to finish its rising in the oven. However, the bread which is barely doubled in bulk and allowed to rise in the oven reaches the same maximum volume attained by bread risen entirely outside, and in addition is of much finer texture, better color, and increased tenderness and silkiness. As high a temperature as 240°C . continued for as long a time as 15 minutes produces a hard, tough crust and loss of brightness, while a lower temperature maintained

throughout baking, with a rise to 235°C . for a few minutes only, produces a tender and crisp crust, with a bright bloom. The most satisfactory baking temperature for loaves risen till doubled in bulk in the pans is as follows: 180°C . for 10 minutes, 180° – 235° rising gradually during the next 15 minutes, and 218° for the last 20 minutes.

The retention of moisture during baking, as in a covered pan or, under some conditions, in a fireless cooker increases the volume and weight of the loaf, but makes the crumb overmoist. The volume is increased because the presence of steam prevents the crusting over of the loaf, thus allowing it to rise more.

The effect of baking upon bacteria in bread was also studied, and in this connection considerable experimental work was done on the subject of "rope." The characteristics of ropiness in bread are these: a day or so after baking, a disagreeable odor develops, the crumb becomes moist and sticky and finally stringy. Brown patches begin to develop throughout the loaf, and finally the entire inside of the loaf becomes a sticky brown mass, somewhat resembling a rotten apple. In order to determine the cause of ropiness, microscopic examinations and plate cultures were made of the infected material, the bacilli present being carefully studied, and sterile bread sticks being inoculated.

As a result, ropiness in bread was seen to be caused by a motile, rod-shaped bacillus which, in some cases at least, and probably in most cases, is found in the flour. The rope producing bacillus withstands baking temperatures, but the bread made from infected flour may be prevented from developing rope by being kept dry and cool after baking. Underbaking and an increase of concentration of the bacilli in the flour, produce an increased rapidity of development.

In order to see if there was any practical application of the fact, discovered by Watkins,² that lactic acid was destructive to rope producing bacilli, flour was inoculated with the bacillus and used in making breads, various attempts being made to retard the growth of the bacillus. Sunning and drying of the flour seemed to have no effect, neither did hop-water. In some cases, buttermilk, used as the liquid for mixing bread, entirely prevented the development, even when the bread was kept in a moist, warm place. The amount of buttermilk used, however, must be in proportion to the degree of infection of the flour. It is possible to have a flour so strongly in-

² *Jour. Soc. Chem. Indus.*, xxv, 1906, pp. 350.

fect that the exclusive use of buttermilk will not prevent the growth of rope. Breads made from exceedingly stiff doughs are somewhat slower in developing rope than those made from soft doughs. The appearance of a pink crumb, caused by a certain variety of coccus often accompanies ropiness.

One practical outcome of this piece of investigation was the making of a score card for use in judging bread. Like all score cards this needs to be perfected by use and is now being tested with this end in view.

A PIONEER COOKING SCHOOL

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Eighteen years ago, several years before the first Lake Placid conference, a little school of Domestic Science was started at Mineville, New York. This little town at the edge of the Adirondacks thus has the distinction of having had the first cooking school in New York State, north of Albany. The school was founded by Mrs. Frank S. Witherbee, of New York, and is called Witherbee Cooking School.

At first there were only a few pupils, all of American birth, in the school, but as the town has been growing and changing, so the school has been growing and changing until now it has an enrollment of over eighty. There are now in the school Poles, Hungarians, Italians, French Canadians, Scotch, Irish, and Americans. Here these races meet and learn to work together for the common good.

Shortly after the school was started Miss Anna Barrows, of Boston, came to inspect it. She stayed several days and gave one of her demonstration lectures which aroused great interest. On her way to the first of the Lake Placid conferences Miss Emily Huntington, founder of the Kitchen Garden Movement, stopped to see the school in 1899. Both Miss Barrows and Miss Huntington expressed approval of its work and methods which have continued practically unchanged to the present, except as the school has grown and as the home economics idea has itself more completely developed.

The school is held in a large room in the Workingmen's Club House. This room has been fitted up by Mrs. Witherbee with everything necessary to carry on the work. The kitchen equipment has been lim-

ited to such appliances and utensils as the pupils can afford to have in their own homes, and these the pupils are taught to use in the best ways possible. The dining room furnishings are more elaborate. There are fine china, dainty linen, and silver, and the children are taught to use these things as they should be used. When it is known that the parents of many of these children are European peasant folk who have been in this country only a few years, the value of such teaching is realized.

For several years there were classes for boys as well as girls but since the classes have grown so large the boys have had to give way. They are remembered as having done excellent and careful work.

At Christmas time, every year, the school sends out boxes of jellies and marmalade (made by the pupils) to the Nursery and Child's Hospital in New York and to Stony Wold Sanatorium in Franklin County, New York. The pupils are thus brought to feel that they are doing some good in the large outside world.

The classes meet once a week, after school. Attendance is purely voluntary and the classes are always over-crowded. Mrs. Witherbee pays all the expenses and no charge of any kind is made for the instruction.

While in the outside world the question as to whether or not the girls should be taught in school to cook has been agitated and discussed pro and con, this little school has been running year after year with ever-increasing classes and spreading its influence for good over a wide territory. Today the first scholars are sending their daughters that they may enjoy the benefits which the mothers have found so lasting.

There has been only one teacher in all these years, Mrs. Sarah Webster Saville. Mrs. Saville studied in Pratt Institute and in the various charity schools in New York City before the Witherbee Cooking School was opened. The class of scholars in Mineville was so different from those in the city that an entirely different method of teaching had to be worked out. That this method was good is shown by the results in the lives of the scholars.

THE BASIC WORK IN PURE SCIENCE IN PREPARING TEACHERS OF HOME ECONOMICS¹

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"The fundamental requirement for progress in applying science is the acquisition of science to apply."

These words of one of the most inspired leaders of the Home Economics movement in America (the late Mrs. Ellen H. Richards) apply broadly to the human race as a whole, and in this sense plead eloquently for the encouragement of scientific research of all kinds, however abstruse and remote from obvious application. As related specifically to Home Economics they call for research in problems whose application to household practice is apparent; and how numerous such problems are every intelligent teacher of Home Economics must be painfully conscious.

But it is with the application of our quotation to the training of teachers of household science that we are at this moment more particularly concerned. Committees of the American Home Economics Association and the Association of American Agricultural Colleges and Experiment Stations have agreed upon the following definition of Home Economics: "Home Economics, as a distinctive subject of instruction, is the study of the economic, sanitary, and esthetic aspects of food, clothing, and shelter as connected with their selection, preparation, and use by the family in the home or by other groups of people." In accordance with the terms of this definition a teacher of Home Economics requires adequate training in the elements of economics, in the principles of art, and in those natural sciences which are related to the economic and sanitary aspects of food, clothing, and shelter.

The natural sciences which have obvious application to the problems of the household are physics, chemistry, and biology. In the field of each of these sciences there are certain topics whose bearing upon household work is self evident, and certain others which, although they may eventually prove of greater importance, are in the present

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

state of our knowledge so inapplicable to household problems that it would be folly to attempt to impose the study of them upon young women whose time is so fully employed in the acquirement of practical knowledge. In the field of physics, for instance, the laws of heat distribution—of radiation, conduction, and convection—are obviously of such great interest in relation to the household that every housekeeper will be profited by a study of them, and every teacher of household science should master them thoroughly. A knowledge of the laws of electro-magnetic induction, on the other hand, is by no means essential to the housekeeper. From a cultural standpoint it is well that she should realize her debt to Michael Faraday for the discovery of these laws and to the local electrical engineer for the intelligent application of them which results in the efficient and sanitary lighting of her home and in the saving of manual labor of the household; but she herself has little occasion to employ these laws. Similarly, although the use of the metal tungsten in incandescent electric lights effects a material economy in the lighting of the house, and although it is of practical importance that she should know that cold tungsten is more brittle than hot, so that she may be wise enough to turn on the current before attempting to clean the globes and although sodium tungstate may be useful for rendering fabrics fire-proof, yet one would scarcely recommend her to devote her attention to the study of the element tungsten to the neglect of sodium, calcium, carbon, oxygen, or nitrogen.

The content of courses in the pure sciences for students preparing to teach Home Economics must necessarily be influenced by the preliminary education of the students, the duration of the Home Economics course, and the local conditions of the institution in which the course is given. It is a common policy in large institutions to make one course in elementary physics or chemistry serve for students of several different schools. Home Economics students may have to acquire the elements of the sciences side by side with students of pure science, of agriculture, of engineering and of medicine. Admitting the economy of such a system we yet maintain that the student of any one of these schools will be better served by a course prepared specifically for that school. The active interest of the student is essential to the satisfactory acquirement of any branch of knowledge. Students of applied science are, I think, especially disposed to lose interest in any subject the direct practical application of which they do not see. To such students the scientific principle must be presented with the practical application in constant view, or at any rate in frequent view. This

may, and usually will, imply the omission of some topics which would receive attention in a general cultural course, or in a course for students of another line of applied science. But it need not and should not involve any attempt to popularize the science by slurring over difficult points. The aim should ever be to instil into the mind of the student that scientific habit of mind which "proves all things and holds fast that which is good," and yet is always ready to question the advantage of established practice and to search for improvements upon even the oldest and most approved manners and customs. To instil this progressive spirit, this "habit of blessed discontent," is of even more importance than to impart useful information.

If possible, laboratory practice should be given in each science studied and the laboratory work should be so conducted as to demand of the student careful observation and independent deduction from the observations. The directions for the laboratory work should be so worded as to induce the student to make the essential observations, and such questions should be asked as will lead her to the desired deduction. But every tendency to note down what ought to have happened instead of what was really observed should be sternly suppressed. If what ought to have happened has not happened the student should be required to repeat the work with more care.

In the domain of physics, the most important topics are no doubt those relating to heat. A comprehensive knowledge of this department of physics is essential to the intelligent discussion not only of the economy of house-heating, but also of ventilation, cooking, and laundry work. Mechanics is possibly the next most important division of the subject. The advantages of labor-saving machines should be so brought home to the housekeeper that she may be capable not only of intelligently appraising the value of the various household appliances that may afterward be brought to her attention, but also of so planning her own work as to eliminate all unnecessary expenditure of effort. Even the height of a kitchen table may make a tremendous difference in the ease and comfort with which housework may be accomplished. Something of the theory of light, particularly with reference to reflection and refraction will be useful in relation to the study of household art. Some knowledge of the laws of electricity is essential to the safe and economic use of this form of energy in the home. The transmission of sound has some application to house architecture. And the great laws of energy, which bind together all

the departments of physics, cannot be left out of consideration. A broad course in general physics, supplemented by a more detailed study of heat and, if possible, of mechanics and certain aspects of electricity would appear to be well suited to our purpose.

In chemistry the course should be so shaped as to arrive without unnecessary delay at the applications to the laundry tub and the dinner table. In teaching chemistry to a class taking a course of a single year, and consequently limited to a weekly lesson of two hours, why not omit the detailed study of the elements, and after introducing the fundamental conceptions of the science, proceed through the characteristics of acids, bases, and salts, directly to the discussion of hard water and soaps? Ammonia and its salts serve to introduce the conception of radicals and so to prepare the mind for the ideas of organic chemistry. The discussion of alcohols and esters brings us at once to the fats. The conception of hydrolysis, introduced in connection with the salts of acid and alkaline reaction finds further application in connection with saponification and with the digestion of fats. Carbohydrates and proteins are then taken up and their hydrolysis studied so as to show the interrelations of the various members of each class, and to account for the changes they undergo during digestion. The chemistry of combustion, of foods, textiles, soaps, dyes, and bleaching agents is of great importance to the housekeeper, but just how fully each can be treated must depend upon the time which it is possible or advisable to devote to this branch of science. Students preparing to teach ought, of course, to have more than one year's instruction in chemistry. Three or four years are desirable; in this time it is possible for them to get a thorough grounding in the theory of the subject, and also to devote considerable attention to the topics specially related to housekeeping.

In biology, just as in chemistry and physics, some general knowledge of the science is necessary as a foundation for the study of its branches which are of supreme importance to the homemaker. These branches are microbiology and human physiology. Some knowledge of botany and of zoölogy, of the structure and physiology of plants and animals may be used by way of introduction and is essential to a satisfactory knowledge of foods and textiles. But by far the most useful knowledge for those who are to have charge of homes and children is the knowledge of human physiology and of the relation of microorganisms to the preparation and preservation of food and to the dissemination of disease.

"To teach women, girls, prospective mothers to war on invisible dirt," says Dr. H. W. Hill of the Minnesota State Board of Health, "is one of the functions of bacteriology. . . . Women must learn to break up, divert, stop in some manner—in every manner—the exchange of normal discharges among children at school and amid families at home, if infectious diseases are to be abolished or abated. The needful information, beliefs, technique, and habits cannot be had or established except by studying the basic principles of bacteriology."

This does not imply that the student or even the teacher of Home Economics need become an expert in the isolation and identification of microorganisms. Even without the use of a microscope it is possible to make convincing demonstrations of the existence of microorganisms in dust, in water, in milk, and in other foods, on the feet of flies, and on human hands, hair, teeth, etc.; to teach the student to discriminate between yeasts, moulds, and bacteria; and to familiarize her with the relation of each to the welfare of the human race. Students preparing to teach should learn to perform effectual sterilization and to prepare the culture media for the demonstrations to which we have just referred, so that they themselves may be able to make such demonstrations. All Home Economics students should have practice in disinfecting rooms, textiles, etc., but this practice can only be intelligent when supported upon a foundation of sound theory.

In the domain of human physiology I will not venture to prescribe the omission of any topic. Almost anything in this science is potentially useful to the homemaker. The nutritional functions and the physiology of childhood and growth should be the central topics of the course, but these cannot be intelligently discussed without constant reference to other functions. The course must also have as a foundation some study of anatomy.

Whenever possible the instruction in each science should be given by a specialist in that science, but the specialist should bear constantly in mind that the object of the course is to train teachers of Home Economics and not to train specialists in his own science.

THE BASIC WORK IN ART IN PREPARING TEACHERS
OF HOME ECONOMICS¹

MARY J. QUINN

Pratt Institute

The purpose of any technical education must determine the course of study. In a school of Home Economics the art training does not attempt primarily to develop technical skill in any of the fine arts, but is directed toward developing the power and pleasure of exercising artistic discrimination in bringing order and beauty into the home and domestic environment. In order to approach intelligently the wide field of special arts which are related to the home, it is necessary to lay a foundation on an analysis and knowledge of the fundamental principles underlying all art. To be able to recognize and discriminate balance, rhythm, and harmony of proportion, line, and color; to be able to judge these when transfused by the inspiration and individuality of the artist and created into the ultimate beauty of a splendid building, a fine picture, a chair, a beautiful rug or tapestry is to have acquired an understanding of the science of art and of the principles which underlie the arts, crafts, and industries related to the home.

To understand the principles of design, one must exercise them in concrete problems. To know, it is necessary to do; and although doing does not necessarily beget knowledge, technical practice is necessary for sound judgment in artistic distinctions. The principles of design should be developed in clear, logical sequence. The problems should include study of proportions, balance, rhythms, unity of form and movement, incoherent repetitions, radiations, and other arrangements of line and mass forms. With each problem it is well to try rearrangements, to strengthen, refine, vary emphases, shift dominations and subordinations, and elaborate detail continually—comparing and analysing each rearrangement—in order to develop understanding and facility for more complex and subtle problems. In a study of color, attention should be directed toward the physical and psychological, as well as the artistic relations, correlating, whenever possible, the work in color study with the work in physics and psychology. In the artistic relations of color after analysing and comparing hue, intensity and values, theories of color harmony dependent on these qualities

¹Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

and on proportions of color in combination should be presented. In illustration of these the students may make color combinations to show the effect of different colors in juxtaposition and varying proportions, and in combination with black and white. Effects of daylight and artificial light on color combinations is an important and interesting consideration.

As far as is practical, these exercises in color and design should be carried out with materials, and in a technique which is of use to the homemaker and of introductory significance to the more specialized work of the course. For instance, an early lesson in the course may be the making of a portfolio to hold drawings and illustrative material. This lesson involves consideration of texture in paper, computing and measuring, and the technique of simple pasting; and it introduces some of the processes of bookbinding. In the study of color, the problems may be carried out through dyeing. An average student will learn more about color with one experiment of dyeing materials for color combinations than with a half dozen color arrangements worked out in water colors on paper. Knowledge of dyes and dyeing processes relieve the homemaker and the teacher from dependence on the crude and limited range of colors available in inexpensive materials. The stencil and the woodblock offer opportunities for different methods in the use of dyestuffs, while the beautiful and useful variations offered in needlework for both color and design are almost unlimited. The surface treatment of woods and the use of varnishes and stains may be carried even to a lacquer finish in the application of designs to boxes, trays or furniture. This treatment involves a technique peculiarly valuable to the homemaker.

The course in design should build the knowledge on which to base the study of the special arts related to the home. With these special arts a new element enters. The preceding work concerned itself with surface decoration, with problems of proportion, of rhythm, of color, in designs of two dimensions. To be sure, there was an emphasis laid on the relation of the design to the form of the space to be decorated—the emphasis of structural form by design; but now we deal with structural designs of three dimensions, architecture, furniture design, metal work, porcelains, and pottery, with emphasis on fitness of form to utility, and limitation of decoration to structural reinforcement. Students should be familiar with the essentials of structural form in each great epoch in architecture, and of the best types of modern and local domestic architecture. In following the evolution of structural form in architecture, they should note the changes due to climate, location, accessibility

of material, and adaptation to manner of living and use of building. Each student should try to plan a house. Preceding this and in preparation for it, consider all the problems which beset the builder—the cost of the house, size of plot, street line, sun exposure, accessibility of materials and labor, and limitations and advantages in country, suburban, and city building. Compare materials with reference to cost, utility, and type and permanence of architecture—advantages and disadvantages of wood, brick, concrete, and stucco. Illustrate methods of construction in each material. Consider in detail the constructing of a house—the foundation, cellar, walls, floors, roof, windows, doors, chimneys, stairs, plumbing, lighting, and heating; and supplement the lectures with illustrative models and with field trips to houses in process of construction. With this antecedent preparation the student should plan a house of simple structural form, including stairways, halls, two chimneys, living room, dining room, butler's pantry, kitchen, bedrooms, bath, ample closets, light, ventilation, circulation, and plumbing, lighting, and heating arrangements. As the work is given for consideration and knowledge of essentials in good domestic architecture, and not for training architectural specialists, it is not necessary to carry these plans further than accurate and readable pencil plans. Time should not be taken for acquiring the finer technique of architectural rendering. Based on the attention given to types and forms of windows and door constructions and the importance of good proportions, it is well for the student to draw a front and side elevation to show the spacing and designs of doors, windows, roof, and chimney in the elevation view.

The interior furnishing involves new consideration. By means of lectures, illustrations, and visits to museums and antique shops, study the development of structural design in furniture. Trace the changes and variations in structural form, in woods used, in upholstery materials, and in craftsmanship through transition from period to period down to furniture made today. Discuss the fitness and availability of materials for houses of moderate cost, and simple manner of living. Develop the history and consider textile design in connection with furniture, and relate, wherever possible, the development of the other artistic industries. Have the students visit shops and museums and gather photographs, illustrations and drawings of furniture, and samples of wall papers, curtain and upholstery materials for the house already planned. Draw floor plans and arrange and rearrange the furniture drawn to scale. From the collections of wall paper, curtain and upholstery materials select combinations for use according to limi-

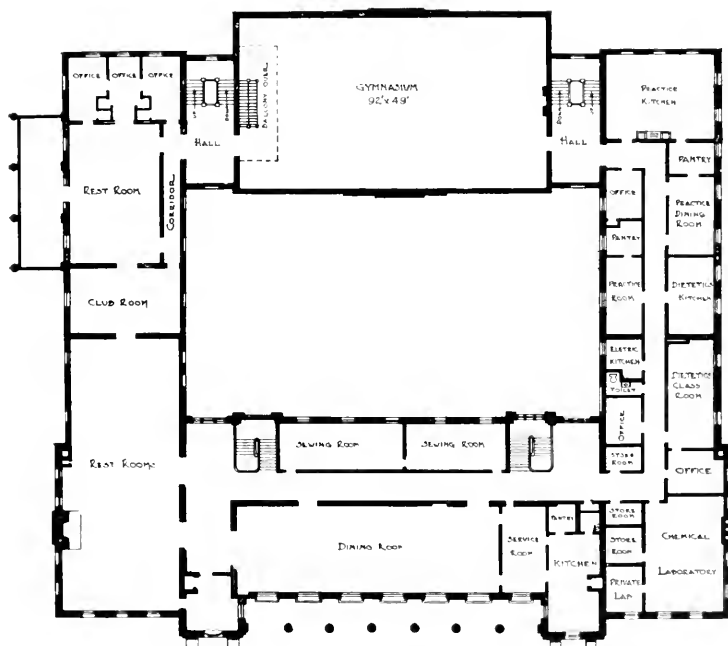
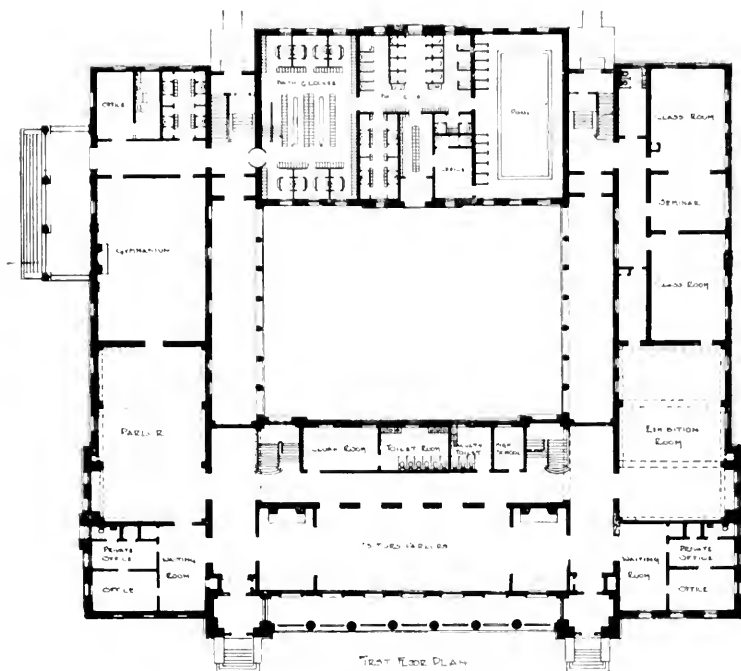
tations and possibilities of each room, and in the proportions of their use in furnishing.

Lectures on rugs, supplemented by a visit to shop or museum; on porcelains and pottery, supplemented by a visit to museum; on processes of picture making, supplemented by photograph, etching, mezzotint, lithograph, engraving, color printing, water color, tempera and oil painting should be given with discrimination and adequate illustration.

Such courses as have been suggested offer opportunities for broad educational values in imaginative stimulus and mental enrichment, as well as technical knowledge, through the development of the subject matter in the dual aspect of its relation to immediate problems of the home, and its relation to the history of art and architecture. The intelligent use of illustrative material will open the doors of China and Persia, of Byzantium and the Renaissance, of English charm and French skill, and play fair substitute for the education acquired by intelligent travel. The problem of spacing and line movement in a border design may be developed by stimulation from the perfection of border on a Greek vase, from the embroideries of a Fra Angelico angel, or from the primitive vigor of an American Indian basket. Color combinations may be evolved with the help and understanding of rich Persian color, of the intellectual clarity of Chinese color, of the vibratory arrangements of the French impressionist colorists. Many points of special interest come up through the individual problems, and students should be encouraged to make special and general collections of illustrative material relating to architecture and house furnishing. Too much emphasis cannot be placed on the value of association and the study of beautiful illustrations and museum collections.

The museums in our larger cities are of invaluable service; and the growing interest in the establishment of art museums in the smaller cities, and in the acquisition of collections of textiles, laces, furniture and art objects bears promise of enrichment for the fields of household art. If we could help museum directors and owners of art collections to realize our need and their opportunity, there might be developed in this country the extension work in museum collections which has been so well administered in France and England. South Kensington Museum in London, and the state museums of France share their treasures with the smaller cities of provincial districts through travelling loan collections to art and technical schools, libraries and art museums.

As the ultimate permanence and joy of any piece of work is a measure of its beauty and its art, must we not help to bring this leaven into the industrial and commercial forces of today?



THE WOMAN'S BUILDING, UNIVERSITY OF ILLINOIS

ISABEL BEVIER

The frontispiece shows the north and east sides of the present Woman's Building at the University of Illinois. The original building was opened in 1905; the new addition was made in 1912. In the original plan, three main lines of work were represented, viz: Home Economics in the north wing; the woman's gymnasium in the central part; the rooms for rest, recreation and the social activities of the young women in the south wing. As will be seen by the preceding cuts of plans, the present building has the same general arrangement, except that the Household Science Department has increased its equipment by the large dining room which occupies the front of the building on the second floor.

This room is 75 feet long and 25 feet wide, and has been equipped as a cafeteria. The color scheme is terra cotta for walls and mahogany for chairs, tables and doors. In connection with this are adequate service and storage rooms, and a well-equipped institutional kitchen.

There is a growing recognition of the need of studying the art of right living, both for the individual and for the community, and also some slight appreciation of the fact that much of the misery of the world is due to food, badly cooked and unattractively served. Most institutions of learning are seeking to provide not only academic training, but also healthful living conditions for their students. It is hoped that this new cafeteria may do its share in helping on this good work, and, at the same time, serve as a laboratory for those seeking instruction in lunch-room management and the preparation of food in large quantities. Each year the call is stronger for the trained woman who can help to solve some of the problems of institutional management and community life.

Near to the institutional kitchen are the diet kitchen and the class room where, by lecture and practice, the principles of rational diet are taught and a foundation laid for the work of the practical dietitian, which is supplemented later by actual practice in the local hospital. Just beyond these is the electric kitchen, where the student has an opportunity to become familiar with an expensive but most attractive form of fuel.

On the third floor, one finds more adequate provision than has hitherto been possible for the study of some of the problems of the

home. The care of the sick in the home is a subject of no small importance. The services of a trained nurse are frequently impossible to the country dweller, and often a luxury not to be afforded in either town or country. Moreover, a little knowledge of emergencies and of the principles of nursing often make the presence of a nurse unnecessary. If the woman in the home understands the proper care of wounds, cases of blood poisoning may be prevented. Provision for instruction and practice in the care of the patient with the appliances that have been found worth while in actual practice, are to be installed in a room devoted to the principles and practices of the home care of the sick. In these days when the interest in public health is so keen, the Department can contribute some training of its students along this line and so help to better living conditions. No one can estimate how much harm is done by those individuals who are ignorant of the simplest laws of public health and who, for that reason, are a real menace to the health of a whole community.

In contrast with the cafeteria on the second floor, which stands in a certain sense for the study of the problems of community life, one finds on the third floor an apartment designed to give individual practice in the problems of the home. A school kitchen and a home kitchen are of necessity very different places if either is a good type in its own field of work. The two have certain principles in common which may be illustrated by quite different practice because conditions are so different.

This five-room apartment is designed to serve as a laboratory for the study of the problem of the household along many different lines. Its plan and equipment, its color schemes, furniture and furnishings, serve as concrete illustrations of art and economics applied to this particular place. Moreover, it can serve as a place for the practice of the principles of home management to students who wish to specialize along these lines.

None of the rooms are large, but they are the usual rooms to be found in a small apartment. The place is not designed as a show place, as a "model flat," for the instruction of the general public in good housekeeping, but rather as a place where, under some of the limitations of a modern apartment, students can find and exemplify according to their ability, the problems connected with the cost of food and care of the house.

While provision is thus made for the newer occupations of women,

such as the dietitian, the manager of the lunch room, and the social worker, better facilities are thus afforded for the student who wishes to study the problems of the school or of the home. The department of course provides an excellent laboratory for the study of the activities of the home.

So much has been said thus far about the extensions and additions on the scientific and economic sides that one might receive the impression that the art side has been neglected. That impression is changed as one walks through the new building and observes the two large rooms on the second floor, equipped for sewing, costume design, and weaving, and the spacious laboratory of applied science where provision is made for the study of the chemistry of textiles, as well as the problems of nutrition.

The new building, therefore, means enlargement of the resources of the department not only in the old and accepted lines of work, but also in the distinct addition of some of the newer phases of the world's work.

COLLEGE EXTENSION IN DOMESTIC SCIENCE

ROBERT WOODS

South End House, Boston

Two years ago a group of experienced settlement executives came together in an unusually solemn session. They had reached the conclusion that something must be done to make their classes in cooking and other household subjects more serviceable and more vital. It was felt that the situation as a whole required careful experimental study and that a higher grade of instruction, which should become systematized and standardized for all the settlements, was a necessity.

With this sense of a deep, unfulfilled need so far as their field of service was concerned, the settlement workers had the conviction that they had a very real opportunity to offer. They realized, of course, the great call of the public school system for teachers of domestic science; but because of that fact they held that the range of experimental training which the settlements could afford to advanced students under competent direction was of the very greatest value. In addition, it seemed to them that the very difficulties of settlement teaching—its lack of formal school sanctions, its necessary adaptation to humble

standards and peculiar traditions, and its complex relations with a scheme of neighborhood betterment—constituted it a rare field for the training of those who should aspire to the higher posts in pioneering and administrative work for the public school system in the future.

These considerations were laid before the authorities of Simmons College, some of whose undergraduates had for a number of years given assistance at different settlements. The College in reply proposed that under a competent supervisor a definite system be organized through which the classes in cooking and other household pursuits should be conducted by its advanced students. The supervisor was to be, on the one hand, an officer of the college, and on the other hand, an official member of the staff of such houses as might enter into the plan. Twelve settlements entered enthusiastically into this project; and work under it was begun in October 1911, with Miss Marie Lundberg, of Simmons College, in charge.

For the first year Miss Lundberg, somewhat after the fashion of the country school-teacher, boarded around at the different settlements in order to become acquainted with the neighborhood problems in the different districts of the city. This year she is residing continuously at the South End House. Working under her direction in thirteen different settlement houses, are twenty-five seniors and fifteen special students, with thirty-five juniors assisting and preparing for more responsible work next year. The work of all these students at the settlements is considered as an integral part of a course in normal training in which they are entered at the College. Each student teaches one class per week. In preparation for each lesson she makes out her own outline and lesson plan to meet the needs of her class. Frequent conferences are held with the students. One period per week the students come together for discussions and criticisms with the supervisor. The seniors taking this course are required to take a course in education with Miss Arnold. In discussions to bring out the essential principles of teaching, the practical experience of the students in the settlement classes furnishes illustrations.

A course of study for the students has been made to aid them in grading the work done by the children. A graded scheme of cooking lessons for three years' work has seemed advisable in order to prevent a needless repetition of lessons. Every effort is made to open the eyes of the student-teachers to the telling points in the particular kind of class work which they are undertaking.

The settlement classes are made up mostly of children under four-

teen. It is hoped that the steady continuance of this system will make it possible to retain the interest of girls in domestic matters, during the baffling years from fourteen to eighteen, with a scheme of instruction which can presuppose elementary housework and will extend to a greater variety of interests involving new ways of applying the imagination. A certain number of young women are reached, particularly those who are engaged to be married, and also some married women.

An increasing effort is made to follow up the instruction in the homes of the children—to see that the lessons are applied, to secure the coöperation of the mother, to gain educational results with the mother herself, and to learn in the most practical way how to adapt class instruction to meager home facilities.

The equipment for classes varies at the different houses. In some there is provision for group work, in others only for individual work. The utensils are in most cases similar to those in use in the homes and are pretty generally limited to the essential ones which should be used and can be procured by even the poorest families.

Thus the students are really participating in the settlement method of attack upon neighborhood problems, and their constant association with settlement workers opens up to them many new ways of personal influence over their pupils and of reaching conditioning factors in the background. Some members of the teaching corps are making special studies of the Jewish, Italian, and other immigrant dietaries. From time to time, more or less formal conferences are held between members of the corps and settlement executives for the sake of a clearer and fuller understanding of settlement methods and motives.

The breadth and actuality of this training, together with the experience in leadership of assistants which the senior students are having, certainly constitute an opportunity similar to that which young physicians and medical students find so essential through their graded hospital appointments. The juniors who have had a year of training in a subordinate position under the system will be able both to give and to get more than those who have not had their preliminary opportunity. After this year it is expected that every teacher in charge will have had a year's practice as assistant. As a whole, the plan gives abundant promise of realizing the hopes held out in the beginning that this system would send out women who could and would assume initiating responsibilities in the ever growing service of domestic science education.

AN EXPERIMENT IN TEACHING ECONOMICS

SARAH J. MCLEOD

Pratt Institute

Our work in economics really begins with the junior students in household administration. Our course differs very little from other courses in administration. We take up as thoroughly as possible in the time at our disposal the division of income and the division of labor in the household, and systems of household accounts. This course was placed in the first term of the first year. Our students have begun to keep personal accounts under our supervision in a prescribed form of classified account books. As this is the first year of this experiment, our data are incomplete. When we have an account of the expenses for one year of every senior household science and arts student, we expect to be able to make some interesting studies of the expenses of the Pratt Institute household science and arts student. The personal expense account ought to be of great value to the household science student. Our experience has been that the average nineteen-year-old girl has, in most cases, very little idea of how she spends her money. She knows, perhaps, what her monthly allowance is and in most cases she knows that she spends all of it, but she does not know how and where her income goes. Account-keeping has always been to her an irksome task but under instruction the girl becomes so much interested in watching her expenditures that her account book is not a wholly dismal affair.

One period of class work a week and two hours for preparation have been allowed for this course in economics, and it is required of all senior household science students. We use no textbook. In the class period a concise lecture is given, really an outline of the work for the following week, and then each student chooses from a list of references those she wishes to read. In this way she becomes acquainted with economics literature and it seems to us that one object of so short a course should be to acquaint the student with as many good authorities on economics and sociology as possible so that she may know where to gain further information. Any course in economics can be only a starting point.

During the first two terms we deal with economic theory beginning with definitions. It is surprising how few students know anything

about the original meaning of economic terms and how these meanings have changed. We then take up the evolution of industrial society, beginning with the family and following the development through the handicraft, domestic, and factory systems, and as students of household science we watch closely the influence on the position of women. The next subjects considered are the production and consumption of wealth; then follows the distribution of wealth. Banking and monetary history are touched upon in a very limited way.

Our third term is given to a survey of practical sociology. We begin by trying to bridge the gap between the work in economics and sociology. We study the causes of poverty, take up the different relief measures, and the study of constructive and preventive philanthropy. The first subject is housing: we try to get an understanding of present conditions and their improvement over older conditions; then we consider proposed housing reform. The next subject is the study of the child in relation to his home environment, and the effect upon the welfare of the child of the following movements: play ground, recreation center, public bath, the introduction of household science and arts and manual training into the schools, medical inspection in schools, and school nursing. Then follow the problem of child labor, the question of social insurance and the effect of each upon the other; then naturally follows the study of the woman in industry, her wages and the conditions under which she works. We study as far as possible from published statistics her division of income and how she might divide her income more advantageously if she saw things in a truer relationship. It is surprising to see what keen interest is shown in this subject and to note the effect that household science and art courses would have upon the present use and division of income. In this short course we can give to our students only a slight acquaintance with economic and social questions but their interest proves that they will continue their studies and apply the knowledge gained.

CLUB WORK IN HOME ECONOMICS: FEDERAL AND STATE CONTROL OF FOOD

HELEN LOUISE JOHNSON

During the last few months we have had the privilege of conferring with the Secretary of Agriculture and others concerning the food work which the Home Economics Committee of the Federation of Women's Clubs has undertaken in coöperation with the Public Health and Legislative Departments. The necessity for uniformity in the matter of food legislation is being discussed throughout the country. It furnished the subject matter for an entire session at the last meeting of the American Public Health Association in Colorado Springs where Dr. Lederle of New York City said: "The aroused nationwide public sentiment which led to the enactment of the Federal Pure Food Law resulted in enormous benefit to the public." He said further that to enforce and improve it, "there is pressing need for continuous and practical coöperation among official agencies, federal, state and municipal, and this coöperation should have for its first object the adoption of uniform food laws, definitions, rules and regulations and, as far as possible, uniform methods of enforcement."

Plans have already been formulated by the Secretary of Agriculture for certain reorganizations in the Bureau of Chemistry looking toward a more effective administration of the Food and Drug Act, and toward greater constructive technological assistance to manufacturers to help them to avoid waste, reduce cost of manufacture, and to develop pure products which will comply with the law. A definite effort is to be put forth to make this act more of a hygienic measure through increased attention to milk, eggs, oysters, and fish, some of the foods which are subject to organic contamination and may become carriers of disease. We can hope that similar hygienic measures will be forthcoming for regulating the handling, marketing and sale of vegetables, fruits and other foods which may also become contaminated and convey filth and disease if conditions surrounding them are not good.

The housekeeper has not fully understood the limitations of the Federal Food Law nor the discrepancies between state laws which cause great confusion and affect the cost of production, distribution and sale. When the laws regarding labeling mean that a package of cereal to be sent throughout the country must be labeled in at least

five different ways, there is not only a loss in the actual value of the label, but an undue increase in the cost of the package.

One of the things which the buyers of food very often do not realize is that the federal statute applies only in the District of Columbia and in interstate commerce. State autonomy is one of the inherent rights granted by our constitution. The individual state is responsible for the health and well being within the state.

At the annual conference of Commissioners on Uniform State Laws held in Montreal in August last, the Committee on Purity of Articles of Commerce was directed to "institute such inquiries into the food and drug laws of the various states as shall determine in what respects they are incongruous and inconsistent with the National Food and Drugs Act and to report to the Conference such recommendations as in the judgment of the Committee will harmonize such laws and further the promotion of complete harmony of food and drug laws throughout the United States."

At a meeting of this committee on Purity of Articles of Commerce held in New York City, in November, one entire day was given over to expounding the troubles of manufacturers in trying to comply with varying state laws and the difficulties experienced by Government inspectors and others in the service. Our representative was forced to ask if the laws had been designedly devised to give employment to lawyers, for there seemed no other good excuse for such discrepancies and trouble. The Secretary of Agriculture has requested that authority be granted to prepare and submit such amendments to the Food and Drug Act as may be deemed needful to safeguard the health of the people, to establish standards, better define drugs, improve the food supply and promote uniformity in the matter of food legislation. The work that our committee has undertaken is, then, in line with those forces which are working toward improvement of conditions surrounding our food supplies.

The great need of the women is to educate themselves in wise buying. They should learn to read the entire label and find out what preservatives or other ingredients are specified, and not merely read the guarantee phrase and conclude that the Government has tested the article for purity, and that therefore it must be all right. They should realize that the guarantee label is in reality only a guarantee from the manufacturer to protect the jobber or retailer.

Much of the confusion over the Food and Drugs Act comes from the prevalent but mistaken idea that it is operated like the Meat Inspection

law. Under the Meat Inspection law the inspectors actually see the animals when alive, see them slaughtered, and examine the carcasses after slaughter. Meat which passes inspection is stamped "U. S. Inspected and Passed" and is therefore really certified by the Federal Department. Before we could similarly guarantee other foods, it would be necessary for inspectors to be present in all factories throughout the entire process of manufacture. The meat inspection is possible because there are only about 800 meat slaughtering and packing establishments that ship into interstate commerce.

Women must also have clearly in mind the fact that the federal food work must necessarily be limited to interstate shipments of products. They should understand that the federal authorities cannot interfere with commerce within a state or have any right of entry and inspection into food factories within the state lines. A factory can be run under the most unsanitary conditions; milking may be done by a man recovering from scarlet fever, or milk may be produced on a farm where a member of the family is suffering from typhoid, and the federal authorities have no power to act. The state authorities, however, can enter these factories and, provided only that their laws are efficient and the funds at their disposal adequate, can prevent the sale of such deadly unlabeled foods.

We should appreciate fully the great importance of having well administered state and local supervision of food substances which may become disease-carriers; we should insist on rigid inspection and then prevent the handling of these substances in shops where they are exposed to flies, dust, dirty hands and other contaminating influences.

When the state funds are apportioned between various departments, there is rarely, if ever, an amount given to a health department which will enable it to amply care for all the problems presented. The housekeeping of a state does not greatly differ from that of the home in the consideration of the greatest need for expenditure without neglect in other directions. Procuring safe water and milk supplies, for instance, may absorb the major part of the funds. Before we criticize our city or our state, let us learn the actual facts and then lend our constructive aid to those movements which will result in the greatest good to the greatest number. This requires educated, intelligent judgment.

First, then, we are to seek that knowledge of the discrepancies in state laws which make misunderstanding add unduly to cost of man-

ufacture and distribution, and which mean the use of money better spent on other things. We are to inform ourselves fully on the details of definitions of food and adulterations, on labels, guarantee clauses, net weights, etc. When we request or discuss needed measures we should also attack the *clean* food problems, for it has been shown that here lies the greatest danger. Dr. Barnard of Indiana takes his stand on the necessity of inspecting those who handle foods as well as the food itself. The dangers from food adulterations are small compared with the dangers of dirty food, but this phase is only now coming to the front.

We are to study our local sanitary code, city and state health laws, and ascertain the limitations of the health ordinances, the power of officials and the funds at their command. We are to compare our laws with those of other states. Wisconsin, for example, has advanced food laws.

We are to know whether food and other health matters are entrusted to temporary health officers, whether there is adequate or poor inspection, whether there is a county health officer, and how these men are appointed and what they are paid.

We need to assist in extending the work of the federal control of foods so that, while still protecting the consumer from adulterations or misbranding which means a monetary fraud, it may prevent the shipment of the dangerous unlabeled foods which can, and too often do, transmit disease.

We need to ask for effective state-wide measures in all states and an efficient permanent staff of health officials who will vigorously supervise the food supply.

There must be a constructive, educational campaign begun among ourselves. There is much to be done, but first we must learn what exists and what has been done in order that we may build on this foundation and wisely coöperate with the work of both our federal and state officials.

Our committee is willing to assist in suggesting topics, programs, study or practical work for any club whose work has been heretofore solely devoted to historical, literary, scientific, philanthropic, civic or art topics, and to try to prove or show that in each of these fields there is a fund of rich material directly applicable to Home Economics.

STUDIES ON FLAX RETTING. T. TAKODORO¹

[A SUMMARY]

ELLEN BEERS MCGOWAN

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This valuable addition to the literature of flax retting contains the results of a more exhaustive study of the process than seems to have been made by any European or American investigator. The researches were not confined to the microscopical and chemical changes in the fiber bundles and their cementing materials, but cover the whole extent of the retting phenomena, the changes in different stages of retting, and the nature and activities of the micro-organisms involved.

Tokodoro's investigation was carried on near Sapporo, a center for the flax industry in Japan. The flax was typical in size and quality, and was retted in a large crate according to the usual method in that section. The author's description of the system is as follows:

"In the large crate system a pit about 60 feet long and 9 feet wide is dug in a location where the inlet and outflow of water can be easily managed, and in it is placed a large crate of woodwork. Each crate will hold about 8000 kin (13,200 pounds) of flax stems.

"When the fermentation is complete, the bundles are drawn out and are placed close together, standing on the bank for at least six hours to allow the water to drain off. When they become firm enough to be transported, they are spread out for drying. When the drying has attained the proper degree, they are again bound into large bundles and kept in a storehouse for future technical manipulations.

"The duration of immersion depends largely upon the temperature of water and air, the qualities of stems, and other natural conditions."

With respect to the anatomical changes during retting, the author states that retting was divided into three periods, and each period covered nearly the same number of days. At the end of the last period, not only the separation of the cambium layer and the isolation of the fiber, but also the destruction of the cuticle had taken place. The separation of the cambium layer from the xylem portion takes place first; then follows the destruction of the cortical parenchyma and some parts of the epidermis; and finally the isolation of the fiber itself and of the cuticle.

¹ Jour. Coll. of Agri., Tohoku Imper. Univ., Sapporo, Japan, 5, 1913, pt. 2., pp. 31-55.

The investigator found that in water retting as practiced commonly in Hokkaido, the loss of the stem due to the combined action of micro-organisms and the extractive power of water is about 18 to 19 per cent. When the retting water is not changed, the loss is 14 to 15 per cent. The loss in the stem proper is about 4 per cent less than the amount above stated. About 50 to 60 per cent of the total loss is induced by the extractive power of the retting water, which is naturally influenced by the frequency of change. In Europe the loss of weight is calculated as about 30 per cent of the original weight in dew retting, about 25 per cent in water retting, and 40 to 50 per cent in mud retting. In the United States, it is estimated at about 18 to 18.5 per cent in common water retting, while in double retting the loss is about 14.5 to 15.5 per cent in the first watering, and about 8.8 to 9 per cent in the second watering.

The general conclusions drawn by the author are the following:

1. Cutin is the essential constituent of cuticle, and tannin is found in the epidermal cell. Fiber consists of cellulose with a small quantity of pectin compounds, protein, and fat-like substance as its integral part. On the other hand, the cell wall of cambium, epidermis, and parenchyma is made up principally of pectin compounds with a small quantity of cellulose. The middle lamella of fibers is composed mainly of pectin compounds. Lignin forms the chief constituent of the cell wall of xylem, while pectin compound forms that of the pith.

2. Water retting involves anatomical as well as chemical changes of the flax stem. In the first stage of retting, we observe the destruction of the cambium layer, and then of the parenchyma, accompanied by the separation of fiber bundles. As the retting proceeds, the isolation of the fiber itself and the detachment of cuticles take place. Nearly all of the constituents of the stems are subjected to chemical changes which are induced by the combined action of microorganisms and the extractive power of water. The loss of weight in the stem may therefore be taken as a measurement of retting grade.

3. The anatomical and chemical changes take place not on all parts of the stem, but only on the bark portion, i.e., outer layers of cambium. The xylem and pith remain almost unchanged.

4. The essential matters which are lost during retting are pentosan, or gummy substance in the bark portion, and fiber (cutin, lignin and cellulose). Of the three ingredients composing pentosan-free fiber, the lignin remains almost unchanged, cellulose loses its small quantity accompanying the destruction of surrounding tissues of fiber bundles

in the bark portion, and cutin is detached mechanically in the later stage of retting, with the destruction of other tissues.

5. Among other ingredients, tannin is lost completely. The larger part of mineral matters and of glucose is also lost. The quantities of protein and fat are very small and their loss may be neglected in consideration.

6. The gummy substance, or pentosan, in the bark portion of the stem is made up largely of xylan and araban, with a small quantity of methyl pentosan.

HOME ECONOMICS DAY AND THE RICHARDS FUND

BENJAMIN R. ANDREWS

Chairman, Memorial Committee

Reports of the observance of Home Economics Day, or Richards Day, began to come to the Richards Memorial Committee immediately after December 3. The Home Economics Association of Washington, D. C., the University of Maine, the Latter Day Saints High School of Salt Lake City, and the schools of Coldwater, Michigan, were among the first to report, with contributions varying from \$5 to \$15. Other reports have followed. The Cogswell Polytechnic School of San Francisco arranged an exhibit of old and rare fabrics. A fuller report of this will be found in News from the Field.

The Tubman High School at Augusta, Georgia, arranged an observance under the direction of Miss Clyde B. Schuman, the teacher of Home Economics. Work was exhibited and classes in sewing and cooking in operation were visited by the several hundred patrons who attended the exhibit. In the hall, booths for the sale of tea, sandwiches, candy and fancy articles, had been arranged and decorated in the colors of the various classes, each of which managed a booth. The sales realized a net contribution of \$25 for the Richards Fund. A committee of students welcomed the visitors, and the local press spoke highly of the impression made by the exhibit.

The School of Domestic Science at the Battle Creek Sanitarium sent \$31.50 and with not less loyalty a school in Kentucky sent its contribution of \$1.55 and its hope for larger success another year. At the Albany, New York, Normal College, an address on Mrs. Richards was given by Professor Cooley of Teachers College, while at Pratt Institute, Brooklyn, one of the most striking observances was carried out

by a committee of students who provided a speaker from each of the several departments of the School of Household Arts and Science.

The Richards Memorial Committee desires to announce that observances may still be arranged in public and private institutions for any convenient day in the current school year. Programs were suggested and outlined in the September *Bulletin of the Home Economics Association*, and will be furnished on request.

A suggestion for the Richards Memorial Day yet to be tried by many club and school groups is along the line of bringing town and country nearer together. The women's clubs of any city could ask country schools in their neighborhood to hold an exhibit and sale of cakes, candies and other articles made in their departments for the benefit of the Fund, the cost of materials to be deducted from the gross receipts. Incidental advantages of the plan need not be cited.

A national committee is now being formed with representatives in each state, to promote the observance of Home Economics Day, and in certain states as North Dakota, much progress has been made. The plans for 1914-1915 are already being drawn up and provide for a celebration of December 3, 1914, as a "Richards-Rumford Day," in joint recognition of the one hundredth anniversary of the death of Count Rumford, the first scientist to study home problems, and of the services of Ellen H. Richards, whom all revere as the founder of the Home Economics movement. Sales of the *Life of Ellen H. Richards* by Caroline L. Hunt (\$1.62 postpaid), the *Syllabus of Home Economics* (paper, 50 cents, cloth \$1), and the new monograph *The Visiting Housekeeper* (paper 25 cents, cloth 50 cents) will aid the Fund. Orders may be sent to the JOURNAL.

EDITORIALS

With this issue the JOURNAL begins a new department, whose aim will be to offer material that shall be of definite help to the housewife in solving the questions that present themselves to her daily in the running of her home. This is not such an innovation as might appear, for, as any one who has read the JOURNAL will agree, although many technical and scientific articles have appeared, in every number there has also been much that the interested reader as well as the specialist could directly apply to the problems of food, clothing, and shelter. But as universities provide technical schools, although their regular scientific courses are rich in suggestion of what may be used in the practical arts, so the JOURNAL has established a Housekeepers' Department, since it feels that the woman running a household has a right to demand that the reports of scientific work in chemistry, physics, etc., should be shorn of many details that play a necessary part in the training of student and teacher and be presented in a form more directly suited to the needs of the home. The housewife is working under pressure, often of the hardest, and has little time for study. Knowledge to be of most use to her must be in a highly digestible form, if not predigested. She is running a business whose daily output of three meals a day, with warmth and comfort and order for a household must not fail, and she cannot turn this home factory into an experiment station. Although she can and does gather knowledge by experience, this is often more costly in the end than laboratory work, and, moreover, there remain a great number of problems which need for their solution every means research has at its disposal, and so it is right that others should solve many of the housekeeper's problems and give her the results in concrete form. It should be noted that housekeepers' problems are already receiving attention in laboratories, and the interest in such research is growing. The JOURNAL in its new Department will endeavor to keep the housekeeper informed of the progress which is being made and to help her to use the valuable data which are being accumulated.

Our plan will be to cover a few main lines of work.

I. Reports on the best *resources in equipment, arrangement, and house construction.*

II. Reports and suggestions on *standard processes* now carried on in the house. Our object is to bring about greater economy of materials, time and energy; but at the same time to reveal the principles on which such improvements are based in order to show the way to other improvements, thus introducing motive and interest into what is too often monotonous drudgery. It has been abundantly proved that many principles of the new business efficiency can be applied to housework; the best result of an effort to apply them is what has been called "the efficient attitude of mind."

III. To give the *scientific principles* underlying questions of foundational importance classifiable under food, clothing, and shelter. For instance, in our present issue we give the basic principles of nutrition illustrated by menus, an article which we consider so complete and so valuable that we shall later refer to it rather than restate it; and we hope to develop a new cumulative index that shall make such reference easy and rapid for the reader.

IV. To show *coöperative resources*: (a) coöperation from within the household; (b) coöperation in neighborhood groups; (c) coöperation in municipal, state, and government reforms.

The "extra" housekeeping or the development of household arts practiced outside the home will include experiments of groups in coöperative buying and cooking, and laundry work; the sanitary condition and methods of inspection of public laundries, bakeries, markets, etc.; laws relating to weights and measures and their enforcement; comparison of cost and quality of work done in the house with that of work done out of the house.

From various quarters we hear the cry, "Oh, reform it altogether!" We are told that as soap making went out of the house so must all other processes. We are urged to turn over at once all house work to a mythical person called the specialist and to agencies not yet fully developed and still wholly independent of sanitary or other control. To their credit women have refused to do this. They will first examine these utilities. Some will be adopted but many household methods will be retained as too intimate to comfort and health to be trusted in outside hands.

We hope to furnish material that is usable and timely, helping to meet present problems and to adjust methods to changing conditions.

Our space will not allow us to print something under all these heads in every issue but a due balance will be kept, and whatever subject is taken up will be treated on the basis of exact knowledge so far as the best workers can furnish it up to date. Studies are now being made for us in different laboratories by competent workers.

With every decade there are to be found in the housekeeping ranks a greater number of intelligent and well-trained women, women who will not be content to follow an unmeaning round simply because it was done by those before them. The new unrest of the time, the growing skill that women are showing in team work, the habit of questioning all things are all leading to real discoveries concerning methods that shall make the individual home a financial, aesthetic and ethical success.

The use of the score card as a measure of complex situations is spreading. It affords an objective method of measuring data that

are otherwise difficult to judge fairly, e.g., dairy condition, live stock, sanitation of restaurants, housing, house equipment, quality of bread, adequacy of nutrition, etc. The method has been perfected in agricultural science and is equally necessary and applicable in household science. The Executive Committee of the American Home Economics Association is arranging for a committee to study and report upon score cards in Home Economics. Those who have devised or used such score cards are asked to send copies to the JOURNAL.

The JOURNAL will be glad to buy at forty cents (\$0.40) per copy the following numbers of the JOURNAL: Volume I, number 1, and

Volume III, numbers 2 and 3. The amount for returned numbers will be credited to the subscription or paid in cash, whichever is desired. Please send to the JOURNAL OF HOME ECONOMICS, Roland Park Branch, Baltimore, Md., and notify the JOURNAL what numbers are being sent.

HOUSEKEEPERS' DEPARTMENT

The editors of the JOURNAL earnestly request assistance from the readers of this new department. They especially desire suggestions for timely topics on which information should be gathered; data either given directly or by reference to books and articles; and records of personal observation.

MENU MAKING AND THE NUTRITIVE VALUE OF MEALS¹

EMMA S. JACOBS

The menus given below furnish some idea of proper combinations of the various food stuffs and the amount of raw material needed for the individual doing moderate work. If every housekeeper will keep accurate record of the food purchased and the number of meals served from it, also of the weight of that which is thrown away she will soon have sufficient data to enable her to closely estimate the amount of food to be purchased for her family. This information, the study of bulletins on food,² and close watching of the markets will help her to run her end of the business of homemaking in a scientific and economical way.

The menus show not only the weight of the individual portion but also the amount of protein and of energy the portions supply. The values for weight, for protein and for energy, of the individual dishes, added together give the totals for a meal, and the totals for the three meals added together give the totals for a day's food.

To help the housekeeper make other menus showing weight of portions and their protein and energy content, a table is given following the menus which shows the weight and the protein and energy content of individual portions of a considerable number of foods or foodstuffs, particularly those commonly used.

¹ For further study see page 15.

² U. S. Dept. Agr., Office Expt. Sta. Bul. 28. The Chemical Composition of American Food Materials. U. S. Dept. Agr., Office Expt. Stas., Circ. 46. The Functions and Uses of Food.

Menus: Weight of foods per person and their protein and energy content

	WEIGHT	PROTEIN	ENERGY
	ounces	ounces	calories
Breakfast			
One peach.....	2	0.008	27
Cream of wheat.....	1	0.110	105
with cream.....	2	0.074	46
Soft cooked egg.....	2	0.268	96
Coffee with sugar and cream.....	1		57
Rolls with butter.....	3½	0.273	322
Total.....	11½	0.733	653
Lunch			
Cream soup of green peas.....	5	0.126	113
Bread and butter.....	4	0.273	434
Blueberries with sugar and milk.....	5	0.074	146
Sugar cookies.....	1	0.07	120
Total.....	15	0.543	813
Dinner			
Lamb broth.....	4		25
Baked bluefish.....	8	0.088	86
Mashed potatoes.....	4	0.088	194
Buttered beets.....	3	0.096	180
Tomato and cucumber salad.....	4		296
Apple tapioca.....	3	0.096	269
Pudding with cream.....	2¼	0.074	46
Bread and butter.....	4	0.273	434
Coffee.....	1		57
Total.....	33¼	0.715	1587
Total per day.....	59¾	1.991	3053
Breakfast			
Cracked wheat.....	1	0.111	105
with cream.....	2	0.074	46
Breakfast bacon.....	1	0.100	65
Creamed potatoes.....	3	0.092	128
Corn muffins and butter.....	5	0.250	414
Total.....	12	0.627	758

Menus: Weight of foods per person and their protein and energy content.—Con.

	WEIGHT	PROTEIN	ENERGY
	ounces	ounces	calories
Lunch			
Split pea soup.....	3	0.258	180
Bread and butter.....	3½	0.273	322
Cream rice pudding.....	4½	0.167	270
Total.....	11	0.698	772
Dinner			
Tomato bouillon.....	6		30
Planked fish.....	8	0.088	86
Baked potatoes.....	4	0.088	96
Stewed corn.....	2	0.056	57
Spinach.....	2	0.042	32
Bread and butter.....	4	0.273	434
Apricot short cake.....	2	0.176	267
Total.....	28	0.723	1002
Total per day.....	51	2.048	2532
Breakfast			
Raspberries.....	3	0.02	138
Plain omelet.....	2	0.268	96
Baked potato.....	4	0.088	96
Rolls and butter.....	3	0.170	387
Coffee.....	1		57
Total.....	13	0.546	774
Dinner			
Clam broth.....	6		30
Baked chicken.....	4	0.772	260
Boiled rice.....	2	0.160	324
String beans.....	2	0.042	12
Swiss chard.....	3	0.042	32
Cottage pudding.....	4	0.250	761
Bread and butter.....	3½	0.273	322
Coffee.....	1		57
Total.....	25½	1.539	1798
Supper			
Chartreuse of beef.....	5	0.310	176
Bread and butter.....	3½	0.273	322
Baked apple and raisins.....	3	0.021	134
Sponge cake.....	2	0.160	106
Total.....	13½	0.764	738
Total per day.....	52	2.849	3310

Weight, protein and energy of individual portions of some of the common foods

	WEIGHT	PROTEIN	ENERGY
	ounces	ounces	calories
2 level tablespoonfuls coffee for one cup.....	$\frac{1}{2}$		
1 level tablespoonful sugar.....	$\frac{1}{2}$		57
1 level tablespoonful butter = 1 inch square by $\frac{1}{2}$ inch thick.....	$\frac{1}{2}$		112
2 level tablespoonfuls flour (sifted).....	$\frac{1}{2}$	0.005	52
1 tablespoonful olive oil.....	$\frac{1}{3}$		85
1 level tablespoonful cocoa for one cup.....	$\frac{1}{4}$	0.054	38
2 level tablespoonfuls fine tapioca.....	$\frac{1}{2}$	0.002	51
$\frac{1}{4}$ cupful corn meal.....	2	0.168	194
$\frac{1}{4}$ cupful cream of wheat.....	2	0.220	210
$\frac{1}{4}$ cupful rolled oats.....	$1\frac{1}{8}$	0.195	135
$\frac{1}{4}$ cupful rice.....	2	0.160	324
$\frac{1}{4}$ cupful canned beans.....	2	0.022	32
$\frac{1}{4}$ cupful canned peas.....	2	0.072	32
$\frac{1}{4}$ cupful canned tomatoes (home product).....	1	0.012	65
$\frac{1}{4}$ cupful coarse hominy.....	2	0.116	206
$\frac{1}{4}$ cupful cottage cheese.....	$2\frac{1}{2}$	0.522	80
$\frac{1}{4}$ cupful top milk for cereal.....	$2\frac{1}{4}$	0.074	46
$\frac{1}{8}$ cupful cream sauce for vegetables.....	$1\frac{7}{8}$	0.026	34
$\frac{1}{4}$ cupful cream sauce for escalloped dishes.....	$2\frac{7}{8}$	0.052	68
$\frac{1}{4}$ cupful cream sauce plus $\frac{1}{4}$ cupful milk for cream soups.....	$5\frac{1}{8}$	0.126	113
3 slices bread, $\frac{1}{2}$ in. thick, 4 in. square.....	3	0.273	210
8 dates.....	2	0.042	202
6 prunes.....	2	0.042	175
1 apple.....	2	0.008	27
dried apples, peaches, pears, apricots.....	2	0.094	161
2 canned peaches, pears.....	5	0.035	69
1 egg (medium).....	2	0.268	96
1 potato (medium).....	4	0.088	96
6 lettuce leaves.....	$1\frac{1}{2}$	0.018	9
trimmed kale, spinach, other greens.....	3	0.042	32
2 thin strips breakfast bacon (if melted fat from it is also used).....	1	0.155	130
macaroni.....	1	0.134	104
cheese (American).....	$\frac{1}{2}$	0.144	64
1 strip ham, $1\frac{1}{2}$ inches wide by 3 inches long....	2	0.326	242
2 slices roast lamb or beef.....	4	0.768	264
raisins.....	1	0.026	100
1 banana (without skin).....	5	0.065	144
8 English walnuts (shelled).....	1	0.166	205
16 almonds (shelled).....	1	0.210	189
2 loin chops (trimmed).....	4	0.640	424
3 sausage cakes.....	3	0.390	398
2 potato croquettes.....	3	0.061	56
2 onions.....	6	0.096	84

The following table shows the general percentage composition and cost of some of the staple articles of food. The maximum and minimum figures are given in order that the range found under usual conditions may be seen. The prices given represent actual conditions noted at the time the paper was prepared. Such a table will help the housewife to compute the protein and energy content of individual portions of a number of foods (raw). The portion to be served should be weighed before cooking and the protein it supplies calculated from the weight of the portion and the percentage of protein in the foodstuff as shown by the table. The energy should be calculated from the weight of the raw material and the energy value for a pound of such material as shown by the table. The calculations involved are simple.

Composition and cost of some common food materials

NAME OF FOOD	COMPOSITION OF FOOD					COST OF FOOD PER POUND
	Protein	Fat	Carbohydrate	Mineral Matter	Water	
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>cents</i>
Meat—Beef, mutton, etc.						
Flank.....	14-25	1-27		0.5-1	33-68	10-15
Neck.....	14-21	2-11		0.5-1	18-14	10-15
Clod.....	16-20	1-17		0.9-1.5	52-59	15-18
Round.....	16-20	2-23		1-1.5	50-65	18-25
Loin.....	12-18	13-24		0.9-1.5	44-66	25-40
Ribs.....	11-19	2-19		0.5-1	39-73	25-30
Poultry.....	16-21	1-20		0.4-1.5	47-75	22-30
Fish.....	10-22	1-17		1-2	35-85	10-40
Milk—whole.....	3-3.5	4-5	5	0.7	87	4-6
Skimmed.....	3.5-4	0.3-1	5-6	0.7	90	2-3
Eggs.....	11-16	8-15		0.6-1	67-75	20-40
Vegetables						
Potatoes, etc....	1-2	0.1-2	13-27	0.5-1	67-84	1½-3
Peas, etc., (dried)	12-24	0.5-3	57-70	2-4	6-12	8-10
Peas (green).....	1-9	0.1-0.3	14-29	0.7-2	58-89	10-15
Cereals.....	6-16	0.1-6	69-81	0.2-2	2-13	2-12
Green corn.....	2-3	1-1.1	14-22	0.7-0.8	72-18	not determined
Greens.....	2-5	0.2-0.5	3-10	1-4	81-92	
Tomatoes.....	0.3-1	0.2-0.5	2-3	0.3-0.5	91-96	2-25
Fruits.....	0.1-1.5	0.1-1	8-29	0.2-1.1	77-92	not determined
Nuts.....	14-27	24-70	6-42	1-4	2-45	10-30
Macaroni.....	7-16	1-5	67-76	0.3-7	7-12	10-20
Cheese.....	15-30	17-38	1-4	3-6	31-45	20-40

The menus given are intended simply to illustrate the method of calculation and not as guides to be followed in detail in the planning of the daily diet. The quantities of protein and energy supplied are rather low and correspond to the minimum rather than the average for a man who is doing moderate muscular work. If a housekeeper planning meals for herself, her husband and three children should select these menus, she might well consider the children as adults and take five times the quantities named, instead of four as she would if allowances were made for the fact that a woman and a child eat on an average somewhat less than a man. The menus would then give an opportunity for the second helpings which the man and possibly others would want, and so increase the protein and energy secured per day.

The menus may also serve as examples of meals which are well balanced as to variety and nutritive ratio, i.e., the proportion of protein to energy, and as examples of simple meals which are not too plain in character to appeal to those who like to pay attention to the graces of the table. In this respect, also, they may be considered to represent the minimum of such meals, for it is obviously easy to add to them but no one of the dishes could be taken away from the menu without materially changing its character. The meals may easily be made more elaborate by adding one or more vegetables to the dinner, or a salad now and then with or without cheese, by using milk as a beverage, and so on. Each added dish means more energy provided, but need not necessarily increase the amounts eaten as many persons will simply eat a more varied, but not a more hearty meal.

Generally speaking, the more elaborate the menu the greater its cost and the greater the opportunity for waste. If out-of-season fruits and vegetables are added, and other foods which have a high water content and consequently low nutritive value, the cost is increased out of proportion to the nutritive material supplied. However, such foods are prized very largely for their wholesomeness and flavor rather than for nutritive material. If foods rich in protein and energy, like cheese or beans are added, the nutritive value would be increased considerably and the cost not very materially. Such considerations as these are fundamental to the intelligent planning of meals, and housekeepers should learn to think about them in these terms.

A \$3 AND A \$16 LUNCHEON FOR TWELVE PERSONS

In a recently published cook book¹ Mrs. Thomas R. Marshall, wife of the Vice President of the United States, contributes to the discussion of possible economies in living, by giving data regarding two luncheon menus, one of them inexpensive and the other costly.

Menu No. I

Beef bouillon.....	\$0.45
Filet of beef.....	3.00
Squabs.....	6.00
Globe artichokes.....	2.00
Potato balls.....	.20
(Salad) Grapefruit and pimientos with lettuce and mayonnaise...	1.95
Roquefort cheese with crackers.....	.50
Fresh strawberry ice cream.....	1.40
Angel cake.....	.45

 \$15.95

\$1.33 a plate.

Menu No. II

Tomato bouillon.....	\$0.25
Beef balls.....	.66
Tomato sauce.....	.20
New carrots.....	.24
Creamed potatoes.....	.22
Cabbage salad with cream dressing.....	.45
Tea biscuit.....	.30
Coffee jelly with whipped cream.....	.40
Eggless cake.....	.20

 \$2.92

\$0.25 a plate.

In the discussion of the menus, it is pointed out that although the first is five times as costly as the second it supplies only a little more protein. In other respects the two menus are practically of equal nutritive value, and both in Mrs. Marshall's experience have been found palatable and pleasing. Recipes for the dishes enumerated are given in the publication cited.

The menus afford a good illustration of the value of intelligence, skill, and thought, in the selection of the less expensive dishes and

¹The Economy Administration Cook Book. Edited by Susie R. Rhodes and Grace P. Hopkins. Published by W. B. Conkey Co., Hammond, Ind., 1913, pp. 696, pls. 46. Price \$2.00.

their combination into menus which do not unduly sacrifice the pleasures of the table. The housewife who wishes to combine economy with good living can with advantage study the menus for her daily meals by the method suggested in this comparison of luncheon menus.

COÖPERATIVE BUYING

One may indeed wonder if the middle man sleeps well o' nights, so determined an onslaught is being made on his very existence.

Coöperative buying clubs have been started in many places. We subjoin partial reports from four.

No. I. The Civil Service Coöperators of Washington, D. C. Number of members 200. Shares \$1, each giving one vote with privilege of buying at the store. Preferred stock at \$5 a share is also to be obtained through dividends or cash payment. The members receive on Saturday a list of articles in stock with current prices and they send in orders on Monday; delivery follows within two days.

Just how the plan is working will be described in our next issue by a member who does not claim to be an enthusiast as to the principle, nor an optimist as to the success of the venture, but is apparently a keen observer of an experiment in which we are all interested.

No. II. Coöperative Buying by a Club of Four. Experiment No. 1. Several crates of strawberries were bought direct from a commission man at 6 cents a box (market price 10 and 12 cents) and delivered free to one address. The woman at whose house the delivery was made canned her berries at once and had no loss. Gain 50 per cent on purchase price.

Second purchaser did not call for berries at once. When she canned them next day she found so much loss that the coöperative buying gave no advantage.

Third purchaser carried eighteen boxes home on car, lost two boxes by accident, could not preserve the fruit until next day when additional loss from keeping took away all profit. Adding to these losses 10 cents for car fare she found that the high retail price charged at her own door in suburbs would have been cheaper.

Fourth purchaser being a neighbor of the buyer paid nothing for delivery and had as good results as the first by preserving the fruit while the berries were in good condition. Gain 50 per cent.

Experiment No. 2. Christmas order of nuts, prunes, candies, raisins, etc., purchased advantageously wholesale but purchasers

allowed the firm to think they were dealers having small stores. One person compared with an accurate list of her last year's order from large reliable retail firm and found same goods at wholesale cost 15 per cent less. All the purchasers were pleased with quality of goods and money saving but were not willing to again adopt misrepresentation in order to gain profits.

Experiment No. 3. One member tried to buy tea-toweling by the bolt but found that the grade she could buy (and then only because she was a friend of the dealer) was not satisfactory in quality.

Experiment No. 4. Two purchasers in trying to buy apples, potatoes, etc., found they could get advantageous rates only by the barrel, and they had no place for keeping this quantity without loss.

Experiment No. 5. Wholesale grocery house refused to fill a large order unless the buyer had license.

Conclusion. One member of the group should obtain a license and then purchase at a good reduction. Perishable goods are very difficult to manage in wholesale lots, few houses having proper storage facilities. There may be large saving in buying ordinary dry goods or groceries coöperatively. The average woman of today is obliged to consider personal inconvenience, car fare, time consumed, exact quality wanted, and carrying of packages as overbalancing any but a substantial profit.

*No. III. The Coöperative Society of Montclair, New Jersey.*¹ Our store is now in its second year of existence and is doing a business of \$100,000 annually. It serves over three hundred families, each one having contributed from \$10 to \$200 to form a capital of about \$9000, sufficient to buy the appliances and stock. We are distributing per month about \$10,000 worth of meats, fish, fruit, vegetables and groceries at a gross profit of about 20 per cent and a cost of 13 per cent for doing business. This 13 per cent includes the cost of delivery. Part of this business is from non-members who do not share in the dividends, so that our present operations indicate a saving to the consumer of about 8 per cent with better assurance of cleanliness, purity, quality and measure than can be had at the average store.

Our form of organization is that of the Rochdale Coöperative Store which consists essentially of stock subscriptions from members. In our case members take from one to twenty shares at \$10 each, receive 6 per cent per annum on stock from first earnings, each stock-

¹ Description given by the president of this society. More details with advice as to organization will appear in the April number.

holder having but one vote regardless of the number of shares he holds. All of the gains in excess of this interest, except for a small reserve fund which would usually go as profits to a proprietor, are divided among the members in proportion to the amount each has purchased. Goods are sold for cash only and at about the prevailing prices for same quality and service in other stores, the savings being paid back in the form of dividends.

Our store has one novel feature in its method of meeting the delivery of goods problem. This service, which has been found very expensive in other places is by our system reduced to a cost of less than 3 per cent on the gross business. The plan amounts to a charge for delivery but is put in the form of a bonus to those who do not use the delivery service. The plan is simply this: at the end of each quarter we give all our members credit for a discount of 5 per cent, the consumer who has had no delivery receives this whole 5 per cent in cash while the housewife who has found it desirable to make use of the wagons is charged according to the service she has had, this charge being deducted from the 5 per cent. The charge is made at so much per call, being the cost which has been ascertained by dividing the total delivery expense by the number of calls made during the quarter. Our cost at present is around 9 cents per call. For example, if a woman has bought \$100 worth of goods and had twenty-five calls she is credited with \$5 and charged with twenty-five times 9 cents or \$2.25, and receives a check for the remainder, \$2.75. By this system the cost of delivery, which in other stores amounts to as much as 10 or 15 per cent, is brought down to a very small figure, our cost for October being only $2\frac{1}{2}$ per cent on the volume of business for that month. By this plan the member who makes no use of delivery is able to get all the saving the store makes thereby and the housewife is encouraged to so systemize her ordering as to require the wagon to come only when necessary. This is very different from what is the case with the ordinary store where a woman can have as many deliveries per day as she wishes and pays no more for her goods than the woman who carries her purchase home.

No. IV. Coöperative Theatre and Opera Going. Experiment of a church club living in a suburb of New York. This is just a simple way of doing together what could be done separately with much less advantage. A season's ticket at the Metropolitan Opera House is not within the means of every one, but the season ticket holders naturally command the best seats. A group purchased two season

tickets together and each couple used them in turn, each hearing four or five of the twenty-three operas. It means that one may perhaps hear operas that he has already heard or cares less to hear than some others, but the underlying assumption is that, at the Metropolitan, any opera, old or new, is well worth the money and that the law of chance is fair in the long run and satisfactory exchanges can generally be made. The group will undoubtedly enlarge from year to year and purchase more tickets. A fractional share of the new Century Opera Company stock has been taken in order that such a group may secure the full advantages of this opera enterprise also.

The Drama Society has an annual membership which costs \$40 a year. This entitles the holder to two of the best orchestra seats for an early performance of each of ten plays which they recommend. It is part of the growing movement to organize the playgoers and to influence the drama for the better by stimulating attendance at the good plays. The early weeks are the critical ones in the life of a new production and it must be supported then or be withdrawn. Many a good play is discovered too late. As our church group wanted to lend a hand in this good work, we took one membership and the secretary of the group secured the names of ten couples, each willing to buy the tickets for some recommended play once during the year. This means that those of moderate means can do what, under present conditions, only the wealthy can afford. Each time a play is recommended the secretary telephones to those on her list until she finds some for whom the date is convenient and who desire to see that particular play. A certain measure of self sacrifice may be demanded in carrying out this plan, and utterly selfish people could not use it. But the advantages, which are partly altruistic and partly cultural, outweigh the obvious disadvantages.

MARKET INVESTIGATION

To illustrate what the united work of housewives can accomplish we quote from a report of the committee on markets of the Women's Municipal League of Boston.

City regulations for provision stores are now in operation. They are comprehensive, aim directly at local Boston abuses and should do a great deal of good. That these regulations were secured, the Board of Health states to dealers in the wholesale sections, is due to "the women's demand for them."

We have in preparation a map of the city that shall have marked upon it by a sticker the location of every market in Boston. These stickers are of three different

colors. By this device the grade of the market whether good, poor, or very bad can be seen at a glance. In this work we were aided by a group of twenty-four Radcliffe students who were given this work in our department to do in place of a thesis.

Professor Monroe wrote us a letter of hearty appreciation of the quality and scope of the work. Because the work was to be done as a part of a college course great pains were taken in the preparation of the plans for the work. The scope, we feel, has proved all we hoped for it, and its working quality more than we dared hope.

When the maps are completed and we have in hand a catalogue of all the markets of the city, we intend devising a plan by which each natural section shall look after its own problems.

DISEASE CARRIERS

It is encouraging to note the progress that is being made all over the country by women's civic leagues and by health boards in improving unsanitary conditions.

Insects and pests have been vigorously fought, dumping grounds have been changed into garden plots, swamps have been drained, dairies and food manufactories have been regulated and inspected, owners of industries involving the use of poisonous chemicals (e.g., the manufacture of paint and matches) have recognized the right of their employees to work under conditions which are not a menace to health.

The secretary of the Kansas State Board of Health, Topeka, Kansas, has prepared an outline for the use of women's clubs in studying health questions. Under foods and drugs appears a study of foods, including their preparation and preservation, a discussion of a proper ration and selection of foods, food adulteration, the sanitation of food supplies, drug adulteration and drug addiction. Rural sanitation, school sanitation and hygiene, the cost of preventable disease, the disposal of waste and the conditions for a pure water-supply are some of the topics included in the outline. Reference to bulletins, government publications, journals and books are also included.

In the June (1913) Bulletin of the Kansas State Board of Health we find this:

In the United States the insect which we most fear, because it is the transmitter of so many diseases, is the common house fly. It has been incriminated as the distributing agent in practically all of the enteric group of diseases. Its annual death toll in the matter of infantile diarrhea, or summer complaint, is enormous. It is conceived in iniquity, bred in filth, and spends a life of crime. The eggs are laid by preference in manure, and this should be our starting point in killing off

this insect. Clean stables, proper disposal of manure, clean yards, proper disposal of garbage, screened houses, screened pantries, screened foodstuffs, all act as deterrents to the spread of disease by this insect. Mechanical cleanliness is most important; then comes the use of disinfectants, such as chlorinated lime, carbolic acid, cresylic-acid preparations, and the like; and, last of all, do not forget Paris green, sprinkled on garbage and manure. It kills off the maggots as they come to the surface. It is cheap, efficient, easily procured, and effective.

In the extermination of vermin of any sort there is no royal road. The battle must be carried on along every avenue of the existence of the creature which it is desired to exterminate. Thus, in combating insects, they must be killed in the egg, the larval, the pupal, and the adult stages. They must be prevented from laying eggs, they must be prevented from gaining sustenance, they must be fought by day and by night, in the places where they live, and advantage must be taken of an accurate knowledge of the breeding habits and life cycle of the species to be combated.

Miss Jean Dawson of the Cleveland Normal School, who has done so much towards making Cleveland a flyless city has issued a pamphlet of useful information about flies. Various magazines have urged that this is the time of year to institute campaigns in order to destroy the flies that have wintered over and to clear away or disinfect breeding places.

Mosquitoes of different species transmit malaria, yellow fever and other diseases. They lay their eggs in quiet water not only in swamps but in our back yards and eaves-troughs or wherever water is kept standing. What has been said about the general method in exterminating flies also applies to mosquitoes. They should be attacked in their breeding places. Pools and swamps should be drained or filled or treated with crude oil or salt. Where this is not safe small fish may answer the purpose. Cisterns, water barrels, or any receptacle that must be kept with standing water should be covered, and cans, flowerpots, basins, etc., should never be allowed to collect water. Doors and windows should be screened with a wire mesh of from 16 to 18 to the inch. Additional screening for beds, if necessary, will prevent the mosquito from doing its most deadly work at night.

The Rat—a Sanitary Menace and an Economic Burden is the title of an article in the U. S. Public Health Reports, vol. xxviii, 1913, no. 27. To quote in part:

The estimate of one rat per human being for the continental United States coincides with that made for Great Britain and Ireland by the Incorporated Society for the Destruction of Vermin, and also with authoritative figures for Denmark, France, and Germany.

The bubonic plague is, primarily and essentially, a disease of rodents, chiefly

the different species of rat, and is conveyed to human beings from plague-infected rats through the agency of the fleas which infest the sick animal.

The extermination of rats is not nearly so easy as fly destruction. An adult rat will on the average produce young six times yearly and from six to twelve young in every litter. Rats can be destroyed by trapping, by poisoning, and by using natural enemies, as certain breeds of cats and dogs. To insure success to these measures it will be necessary to curtail the rat's food supply by properly disposing of garbage and table refuse and by preventing rats from gaining access to such food as is contained in pantries, groceries, markets, stables, etc. The prerequisite of successful trapping is that no food other than the bait should be available to the foraging rodent. Other things being equal, highly savory articles, such as cheese and toasted bacon, will more quickly attract rodents than will food without odor, but the idea that a rat can be enticed into a trap by the employment of bait more appetizing to him than the surrounding food supply is fallacious. In one instance, where a bakery was overrun with rats, cheese, bacon, meat, vegetables, flour, nuts, and every known kind of bait in turn was used without avail. Finally the bakery was moved and the building closed preparatory to rat-proofing. Three or four days after the removal of the stock, when all loose flour and food had been consumed by the rats, the trapper caught over 30 rats in one morning and in four days the place yielded a bag of some 80 rodents. Traps or poison placed in the neighborhood of an overflowing garbage pail, in a pantry with open bins and exposed food or in groceries and warehouses having foodstuffs spilled over the flour, will only result in wasted endeavor.

Along with other measures for the destruction of rats, all buildings, chicken yards, garbage receptacles, sidewalks, and planked areas must be built or repaired to prevent rat harborage. Plank sidewalks and plank coverings for yards should be avoided. Cinders or concrete are preferable for this purpose. The latter should have marginal protection to prevent rats from burrowing beneath it. Double walls with a dead space between should be avoided or if used, they should be rat-proofed at top and bottom. Attics should be well opened and kept free of dunnage or other refuge for rats.

The municipal government will have to assist the efforts of citizens along these lines by creating and enforcing suitable rat-proofing laws.

City water is often polluted because of lack of control of the water shed or because of indifference in regard to waste matter of all kinds that is emptied into a river along its course. In the country, sewage and water supply are frequently very closely related. Consequently people who go from a city where the drinking water is safe, may become victims of typhoid.

There should be such a united outcry against these conditions that every city and every country dweller would be compelled to furnish safe drinking water. Vacationists should refuse to patronize any country place which supplies impure water.

If there is the slightest doubt as to the quality of the water which anyone is obliged to drink, the following simple remedy [according to the July (1913) Bulle-

tin of the Kansas State Board of Health} will make it safe: Get a one-pound metal can of chloride of lime, or bleaching powder. Take a level teaspoonful of powder and a few drops of water, and make a thin, smooth paste in a teacup. Then dilute this paste with four cupfuls of water. Place this stock solution in a clean, stoppered bottle and keep corked tight.

This is enough to disinfect 250 gallons of water. Use a teaspoonful of this stock solution to two gallons of water. Stir well, and use in from a quarter to half an hour. If the water has a slight odor of chlorine, use slightly less of the stock solution. Find out how much stock solution it takes to give a slight odor to the water, then use about one-fourth less than the quantity necessary to produce odor.

Water thus treated is absolutely harmless. The chloride of lime is consumed by the water in ten or fifteen minutes, and even if it were not, in such small quantities it would be harmless.

Fresh stock solution should be made every three or four days, and the powdered lime should be kept in a tightly closed can.

CLEAN HANDS

The beauty of clean, soft hands and well manicured nails is of no consequence compared with the vital point of cleanliness. When we consider the thousands of ways in which disease is transferred by unclean hands it is astonishing how unconcerned we have been and how placidly we allow the transfer of typhoid, tuberculosis, etc., to continue in our homes, in schools, markets, hotels—in fact everywhere.

Crusades have been conducted against flies, unclean streets, and various causes of occasional or possible infection or contamination but the unclean hands which constantly come in contact with food are allowed to carry on their deadly work undisturbed. It is true that some effort has been put forth by the best food manufacturers who have posted in their work rooms: "Never return to your work room, after any absence, without washing your hands." If this were more commonly required the "Typhoid Mary" incidents would disappear.

Diligence on the part of the housewives could soon bring about the elimination of this source of danger. There must be personal care that their own hands are thoroughly washed and rinsed in running water before going from the street, the toilet, or the general housework into the kitchen—in short, before handling any food or anything that is to contain food. The same must be exacted from their cooks and servants. Their children must be taught to follow their example and also to avoid the habit of putting fingers into the mouth or of biting finger nails.

By concentrated and coöperative effort outside the home they can demand clean hands in bakeries, groceries, markets, hotel kitchens,

dairies, and in every place where food is handled. Wrapped bread is an illustration of a defensive measure in a case where delivery may mean contact with hands that have just curried the horse.

The coöperation of food manufacturers, food dealers, and food inspectors should be enlisted.

Teachers can also aid in this good work by the proper instruction of pupils and by the demand for warm, running water and paper towels in the school lavatories.

Publicity and open discussion of this topic, often regarded as too unpleasant to be mentioned, should be encouraged by every parent, housewife, and teacher.

EXERCISE FOR THE HOUSEWIFE

In the August-September (1913) bulletin of the Texas State Board of Health, Ella Randall Pearce makes suggestions in regard to dress and exercise for the housewife which, if carried out, the writer quoted believes will banish fatigue and promote good health and help the homemaker to secure a growing increase in efficiency and prevent housekeeping from detracting from the joy of living.

The early morning exercises are as follows:

1. While lying in bed, slip the pillow from under the head, flatten the back, throw the arms outward, and stretch completely from head to foot. Then, folding the hands loosely above the stomach, inhale several full, deep breaths, drawing in all the air you can with comfort, and slowly and regularly exhale in the same complete and deliberate manner.
2. Slip the feet under the foot rail or behind a broad strap arranged for the purpose; then, with the arms still loosely folded, draw the body up to a sitting posture, keeping the lower limbs straight. Relax very slowly, returning to the first position, and repeat this exercise several times.
3. Slip the feet from their bonds and, lying flat, raise the lower limbs slowly and steadily to a position at right angles to the rest of the body, and repeat several times.

Some task which has strained or cramped the body may be offset by the following: Stand erect with arms swung above the head, palms forward. Without bending at the knees sway forward and downward as far as is easily possible. Stand erect again; then, with arms still upright, swing backward in the same manner. After this,

place hands on hips, and, bending at the waist, lean forward; then backward; next to the right; then to the left; and finish by twisting the body at the waist line, by a succession of the foregoing movements.

Other suggestions may be thus summarized: When at work, keep the body in correct position—head erect, chest forward, abdomen held in, and the weight of the body on the balls of the feet. Sit as much as possible at work, use the knees and hips more and the back less when stooping; keep the weight of the body over the feet when ascending or descending stairs, and take a few minutes of complete relaxation of body and mind every day. If there is no other time for outdoor exercise, at least walk to the market or the grocery. About the house wear comfortable, neat clothing, and by all means avoid worn out street-wear and ill-fitting, shapeless shoes, for slovenly habits in dress tend to induce slovenly habits in work and also a carelessness and lack of interest in all matters of importance to the homemaker.

COST OF LIVING

That the housekeeper's problem of the increased cost of living is not an imaginary one or one caused by increased extravagance is shown by a report of the Chicago Nursery and Half-Orphan Asylum.

Average cost of maintaining one child for a year:

1874 to 1883.....	\$79.98
1884 to 1893.....	88.68
1894 to 1903.....	101.45
1904 to 1913.....	140.60

The contributions of food, clothing, etc. (not included in this estimate) were approximately the same during the different years and therefore do not affect the figures.

WASTE IN PREPARING FOOD

A paper by Charles S. Prizer read before the 40th annual meeting of the National Association of Stove Manufacturers, while mainly a plea for new methods of advertising in the stove business, introduces in its last section an idea which might develop interesting possibilities if properly worked out. The author estimates the total annual expenditure for food in the United States on a daily 25 cent per capita basis, and from that the value of food wasted, which he assumes to be 10 per cent of the total food and which would thus amount in value to about \$821,000,000. He assumes further (one is not told why)

that 6 per cent of this loss, or almost \$50,000,000, is due to defective cooking apparatus, and thus paves a smooth, straight way to the economy of exchanging old stoves for new. As has already been suggested, the figures seem to have been chosen somewhat arbitrarily. The necessary data for calculating the considerable loss of fuel and material which is undoubtedly due to poor stoves ought to be obtainable. Who will help us to obtain such data?

SUGGESTIONS TO RELIEVE THE MONOTONY OF HOUSE WORK

Early rising for the housewife, the first hour to be spent in reading, writing or thinking, in order, first, to cultivate the use of the intellectual powers when they are at the freshest; nothing will give more satisfaction to the restless mind that now feels cheated of its rights by the all day requirements of housework. Second, to gain the power to put the duties of the coming day in their right relation and proportion—some to be held close, some kept at arm's length. For many this hour can be best gained after breakfast when the children have gone to school and the grown members to their work outside. A farmer's wife who had moved to town made this speech over a pound of bacon just delivered by the grocer: "I miss my pork barrel. Down in the cool, quiet cellar where I went to cut the pork before breakfast, I always took time to say my prayers and straighten out the day ahead of me."

CREEDS FOR 1914

We print two creeds that have been sent to us, both nobly stated and both appealing to large groups of earnest women.

A Woman's Creed for 1914

My home is my profession.

I will apply to homemaking the same science and culture demanded by any other profession.

I will not be the servant but the master of my work.

I will protect my home interests; if need be, in town, state and national affairs.

Above all, I will hold myself love's high priestess—that more love and more life may be.—*Christine Frederick.*

A Creed of Work for Women¹

I believe that every woman needs a skilled occupation developed to the degree of possible self-support.

¹ Reprinted from the *American Magazine*, June, 1913.

She needs it commercially, for an insurance against reverses.

She needs it socially, for a comprehending sympathy with the world's workers.

She needs it intellectually, for a constructive habit of mind which makes knowledge usable.

She needs it ethically, for a courageous willingness to do her share of the world's work.

She needs it aesthetically, for an understanding of harmony relationships as determining factors in conduct and work.

I believe that every young woman should practise this skilled occupation, up to the time of her marriage, for gainful ends with deliberate intent to acquire therefrom the widest possible professional and financial experience.

I believe that every woman should expect marriage to interrupt for some years the pursuit of any regular gainful occupation; that she should pre-arrange with her husband some equitable division of the family income such as will insure a genuine partnership, rather than a position of dependence (on either side); and that she should focus her chief thought during the early youth of her children upon the science and art of wise family life.

I believe that every woman should hope to return, in the second leisure of middle age, to some application of her early skilled occupation,—either as an unsalaried worker in some one of its social phases, or, if income be an object, as a salaried worker in a phase of it requiring maturity and social experience.

I believe that this general policy of economic service for American women would yield generous by-products of intelligence, responsibility and contentment.

—*Laura Drake Gill.*

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BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS at the price listed.

Nutrition and Diet. By Emma Conley. New York. American Book Company. \$0.60. By mail of the Journal, \$0.65.

This text-book for secondary schools is designed to replace the time-consuming method of note-taking by the pupils. The keynote of the book may be expressed in the words of the author: "The important point is to learn how to plan meals easily, quickly, and accurately according to any standard." Part I discusses the principles of nutrition, and the application of these principles to the practical planning and serving of meals. Actual menus are given for six people and the calories of protein, fat, and carbohydrate per day are worked out with the aid of simple tables which obviate the necessity of long and irksome calculations. The cost of food and labor are also considered in the planning of the menus.

Part II deals with a detailed study of our ordinary foods with reference to structure, composition, nutritive value, and processes of manufacture. Technical terms and classifications are included in the text but the main emphasis is laid on the well established facts of nutrition and their relation to health and efficiency.

It is not easy to simplify the teachings of science without occasionally making statements that are not wholly clear to one unfamiliar with the details of laboratory work. The following statement is a case in point. "The body needs a certain amount of food daily to supply it with energy needed to maintain normal bodily temperature and for work and muscular activity." This does not cover the case. If body temperature is mentioned something more should be said. Body temperature is a balance between heat produced by work—internal and external—and heat eliminated. It is only when heat is very rapidly lost that energy is changed to heat to maintain normal bodily temperature.

The Chemical Composition of Florida Oranges. By A. M. Henry, Fla. Quart. Bul., Dept. Agr., 23, 1913, no. 2, pt. 2, pp. 53, pls. 2.

This publication reports the results of a chemical examination of fruit, in various stages of ripeness, obtained from the principal orange growing districts of the state.

Full analytical data are given together with methods of analysis. It was found that fruit which contained not over 1.25 per cent of acid was always edible and desirable, and as a result of this investigation the following standard for oranges was recommended: "Orange, sweet orange, is the ripe, mature fruit of *Citrus aurantium*, the juice of which contains not more than 1.25 per cent by weight of total acid, determined as crystallized citric acid."

Sugar and Acid in Oranges and Grapefruit. By S. E. Collison, Fla. Sta. Bul. 115, 1913, pp. 23.

Results are reported of analyses of over 500 lots of oranges and grapefruit. According to the author, the results show that there is a gradual increase of total sugar and a gradual decrease of acidity as the oranges mature. Apparently all

the acid of the fruit is formed early in the season, while sugar continues to be formed until maturity. In oranges both sucrose and reducing sugars increase at about the same rate, with the former averaging a little higher than the latter

"For grapefruit the increase of sugar and decrease of acid is apparent, but not nearly in so marked a degree as in the orange. After grapefruit reach maturity there is a noticeable increase in reducing sugar, with a corresponding decrease in sucrose, pointing to a breaking down of sucrose into dextrose and fructose.

"Consideration of all the data presented establishes the fact that the demarkation between fruit classified as sour and that classified as sweet lies near the ratio of one of acid (anhydrous) to seven of sugar, in the grade here called tart. In a similar way the demarkation between fruit classified as very sour and that classified as sour lies near the ratio of one of acid (anhydrous) to four of sugar."

Some Results Obtained in Studying Ripening Bananas with the Respiration Calorimeter. By C. F. Langworthy and R. D. Milner, U. S. Dept. Agr. Yearbook 1912, pp. 293-308.

Data regarding the changes which take place in ripening bananas are summarized and the results of an experimental study of the ripening of this fruit made with a respiration calorimeter of special construction briefly reported.

The results which have been obtained show that the ripening changes progress regularly to a maximum and then decline; that at its greatest intensity the heat production is equivalent to about one-half calorie per hour per kilogram of bananas. "The heat liberated is a measure of the activity of one or more of the ripening processes. Analysis has shown that during ripening the banana starch is transformed into cane sugar and the cane sugar into invert sugar, and that there are important changes in the character of the tannin compounds, and that other changes occur, brought about by the production of aroma and flavor bodies, and perhaps in other ways. It has also been found that in addition to the transformation of carbohydrates there is an actual loss of this food constituent during ripening. From the data for oxygen consumption, carbon dioxide, and heat output it appears that the heat liberated by the ripening bananas is largely due to the destruction of carbohydrate."

The results which are reported and discussed represent only part of the experimental data which have been accumulated. "No attempt is made at this time to draw deductions regarding the practical applications which can be made, as this may be done more properly when experiments now under way are completed."

Sugar and Its Value as Food. By Mary H. Abel, U. S. Dept. Agr., Farmers' Bul. 535, pp. 32.

This bulletin is an extension and revision of an earlier Farmers' Bulletin (No. 93) of similar title.

The chemical composition and characteristics of sugars of different kinds, commercial glucose, and other similar products made from starch, the source and quality of sugars, the food value of sugar, table sirups, molasses, and sugar cane, and similar questions are discussed, as well as the practical use of sugar in the ordinary dietary and the dietary of children.

The Price of Meat in Paris. (*Le Prix de la Viande à Paris*). By Paul Vincey. Paris. 1912, pp. 151, pls. 6, figs. 57. Privately printed. Fr. 7.50.

This pamphlet is among the recent contributions to the study of the cost of living in France. The statistics which it gives are based on the official market reports of the Police and of the Prefecture of the Seine and include wholesale and retail figures for beef, mutton and pork from 1840-1911, and for veal and horse meat from 1866-7 to 1911.

The three special points which the author tries to explain from a study of these prices are: (1) Variations in the wholesale and retail prices of meat; (2) the increase of price caused by the retail sale of meat in small city shops; and (3) the distribution of the proceeds of the sale of meats in Paris among producers and middlemen.

He concludes that, "on the average, of every franc spent by the consumer, 76 centimes go to the original producer, 2 centimes to the railways, 1 centime to the cattle commissioners, 5 centimes to the city of Paris for 'octroi' duties, slaughter-house and market fees, etc., 3 centimes to the wholesale dealers, and 13 centimes to the retail dealers."

One of the interesting features of the book is the plates given in the appendix which show the methods of cutting meat in vogue in the Paris markets in 1851 and today and the names of the different cuts. The ordinary French-English dictionary throws little or no light on the exact meaning of such terms, and sketches of this kind are, therefore, of unusual help to anyone interested in French meats and meat dishes.

Fifty Years in a Maryland Kitchen. By Mrs. B. C. Howard. Baltimore: Norman Remington Co. 1913, 5th edition, pp. xxi + 419. \$1.50. By mail of the Journal, \$1.62.

This new edition of a cookbook well known to an earlier generation and long out of print was made, the publisher states, to meet a demand for it. It was originally published to aid certain benevolent undertakings and contained recipes which, with few exceptions, had been tested in the author's own family, and which were selected from a collection made during a period of more than fifty years.

The present edition has many additional recipes "long in use in Maryland, Virginia, and other parts of the South." The book includes a long list of dishes, many typical of times when eggs, butter and cream were lavishly used and, as a whole, gives a good selection of the old-time dishes which we associate with southern hospitality.

The numerous recipes for corn meal, for hominy and rice, for pickles and preserves (some unusual like May apple preserve, "far prettier than limes and almost as good," Haw jelly, and Fox grape jam) afford interesting examples of the ways employed to secure variety in the diet from home grown materials or the food supplies generally available in times when cold storage and improved transportation did not bring all countries and seasons to our doors.

A Book of House Plans. By W. J. Butterfield and H. W. Tuttle, Architects. New York: McBride, Nast and Company. \$2. By mail of the Journal, \$2.20.

This book will be welcomed by those who have tried often without success to find really good designs for inexpensive houses. The statement, "Homes of char-

acter, costing \$3,000 to \$6,000" seems fully justified in the twenty-one different types of houses presented. In each case the floor plans and elevation are shown so that the builder can form a good mental picture both of the exterior and interior. Moreover the designs cover a wider range of types than are usually given in small house plans. Various types of English and Dutch houses are shown, as well as Colonial, and even an Italian villa and the Spanish Mission house. "The examples accurately portray the spirit and architectural characteristics of their respective styles."

Other good features of the book are the explanations concerning the essentials of good architecture; the chapter on cost with actual figures for different parts of the country; the relation of the landscape work to the house and the necessity for considering this in making a harmonious effect. The authors seem to have accomplished their aim which is stated as follows: "The aim of the authors has been to emphasize the really essential features and eliminate all that might be considered superfluous or not consistent in a house of moderate cost. Simplicity of plan and exterior treatment means economy but not necessarily ugliness. The success of an architectural design, in a building of any description depends principally upon its proportion, scale and fenestration, and no amount of elaboration can atone for a poorly proportioned building."

A Book of Distinctive Interiors. Edited by William A. Vollmer. New York: McBride, Nast and Company. \$1. By mail of the Journal, \$1.14.

This is a second edition of the books written to help the woman to decorate and furnish her home in good taste. The table of contents shows that the essential rooms of the home, viz., the living room, the dining room, the bed room, bath room, nursery and kitchen, have been considered as well as types of halls and stairways.

The author says there are probably two or three dozen ways that the living room can be planned and decorated and at the same time be comfortable and attractive. He then proceeds to give illustrations of a number of these ways which do have distinctive features, sometimes in the treatment of the fireplace, the ceiling or side walls, or in the furniture combinations. The colonial type prevails though there are examples of the English and Dutch builders. It seems unfortunate that the following statement should have been left without a word of warning as to the *kind* of red suitable for north rooms: "As a general color rule for decoration, red should be used for north rooms." Golden yellow is often much more effective and gives the impression of a sunlight quite impossible to the shade of red generally used. Some criticism may be given to the illustrations of both bed rooms and living rooms because of too much furniture for a place of rest and too little space in which to live. The dining rooms shown are varied, simple and attractive and there are very good suggestions in the illustrations of the kitchens and of that difficult problem, the stairs.

On the whole the book has much to commend it.

Opportunities in the Field of Nursing. New York: Nursing and Health Branch of the Alumnae Association of Teachers' College, Columbia University. Pp. 44. \$0.10.

This pamphlet aims to provide the public, and particularly young women just leaving school or college, with definite information about the modern profession of nursing.

A brief historical note traces the development of nursing to its present status, shows the general scope of the work today, and devotes a brief descriptive paragraph to each of the special branches of nursing. These are seen to be many and varied, and by the time we have followed the modern nurse into hospitals, sanatoria, tenement houses, public schools, health departments, shops and factories, it is impossible not to recognize the importance of her services for public welfare; and it is easy to see that a work so filled with human interest, ministering in so vital a way to human necessities, and touching life at so many points, must be very satisfying to those who perform it.

The necessity for careful preparation is evident, and is strongly urged; and valuable information is given concerning training schools for nurses and their standards of work. Subjects of study, character of instruction, facilities for training, and conditions of living are discussed. Young women in choosing their work should study carefully this authoritative material concerning one of the rapidly growing and more important modern professions.

School Hygiene. By Fletcher B. Dresslar. New York: The Macmillan Company. 1913, pp. xi + 369, figs. 51. \$1.25. By mail of the Journal, \$1.37.

This handbook, which is one of the Brief Course Series in Education, discusses hygiene in its relation to schools and pupils in language perfectly intelligible to the "busy teachers" for whom it is intended, or even for the non-pedagogic reader.

Each of the 26 chapters discusses a different phase of the subject, but the topics presented fall into two general groups: Those dealing with the physical environment of the school child, and those dealing with the "proper adjustment of the subjects of the curriculum to the mental powers and needs of the children."

In the first group, which occupies the greater part of the book, we find discussions of the location and construction of buildings and of their lighting, ventilating, heating, sanitary equipment, and furniture. In the second group, emphasis is laid on such points as the need of medical inspection, the care of vision, hearing, and teeth of pupils, the treatment of stuttering, the significance of fatigue, and the care of exceptional children. The proper methods of cleaning the school rooms and their contents, and the qualifications and duties of the school janitor are also discussed.

In most instances, a practical suggestion is presented with the theoretical consideration. It may seem a counsel of perfection to ask any but very exceptional schools to come up to the standard suggested for all the points mentioned. Nevertheless, the book encourages the belief that a decided improvement is not too much to hope for, even in country schools.

Training the Boy. By William A. McKeever. New York: The Macmillan Company. 1913, pp. xviii + 368. \$1.50. By mail of the Journal, \$1.62.

This book should be in the hands of every person who has anything to do with boys—parents, teachers, juvenile court officers, and all other social workers. "The motto of this book may be expressed in these words: *Train the whole boy and not merely a part of him.* . . . it has been my purpose to attempt to sketch a practical plan for rounding out the whole boy, and to place the emphasis upon all rather than upon some of the forces necessary for such complete training." These statements from the author's preface express his aims. Although this claim is very preten-

tious for a single book, twenty-four sane, well organized chapters go far in convincing one that the author has succeeded in offering plans for this complete training.

The book is divided into five parts, dealing respectively with Industrial Training, Social Training, Habit Training, Vocational Training, and Service Training. Under Industrial Training, the author portrays the necessity and means of developing an intelligent and appreciative knowledge of, and feeling for, physical activity and work by participation as means of wholesome growth, physical and mental. He discusses possibilities in the pre-school period, vacation employment, and adjustments during the school period for both in-school and out-of-school activities. Employment for wages with its methods, values and dangers is carefully considered. Play, recreation, and social development through other coöperative social experiences receive an unusually discriminating and common sense treatment in part two. In this difficult phase of boy training, as in that of habit formation where problems of good habits, bad habits, and the sex question are discussed, the author shows his keen appreciation of boy psychology and pedagogy. Any one having much to do with boys will welcome the practical suggestions found here. The chapters on vocational training and vocational guidance are equally fundamental and suggestive. Service training includes a discussion of preparation for citizenship, social service, home life, marriage and parenthood, and for the religious life. Here again the author draws the issue sharply, and deals directly and forcefully with vital problems.

The treatment throughout is wholesome and helpful. The author knows the boy—his limitations, temptations, and impulses for wrong doing, as well as his ambitions, possibilities, and aspirations. He knows how to direct these for the well-being of the whole boy.

Thirty-five well chosen illustrations add much to the attractiveness and forcefulness of the book. Each chapter is followed by a brief and carefully selected bibliography.

Historical Costumes. Illus. London News [Amer. Ed.], 53, 1913, no. 1387, pp. 842, 843, figs. 8.

A brief note with reproductions of photographs, regarding the Talbot Hughes collection of costumes recently purchased as a gift for the Victoria and Albert Museum.

The collection includes over two thousand pieces of "wonderful fabric and design forming almost one hundred and fifty costumes complete from the Tudor period down to the present time. It shows the development of fashions and designs, fabrics and embroideries of the finest and best sorts.

Silk Manufacturing and Its Problems. By James Chittick. New York: James Chittick. 1913, pp. 432 + 130. \$2.80. By mail of the Journal, \$3.

This book, by a well known authority, gives detailed and comprehensive information on the subject of silk manufacturing, beginning with the choice of mill location, and making clear the laws which govern the operation of a large business. The purchase, classification, and characteristics of raw materials are taken up in detail, and all processes of manufacture, expense of production, and problems which are likely to arise, are gone into thoroughly.

It embraces, in short, a mass of accurate inside information, relating to silk manufacturing and distributing, never before presented in print, and most of it of a kind most jealously guarded and very difficult to obtain.

Although this is distinctly a book for mill men, it contains much valuable information for teachers of textiles, and a number of points are given which one does not frequently run across. Especially valuable are the paragraphs on the different operations of dyeing.

Syllabus of Home Economics. Baltimore: American Home Economics Association. 1913, pp. 69. Paper, \$0.50; Cloth, \$1.

In this syllabus, which was prepared for the American Home Economics Association, by its committee on nomenclature, the attempt has been made to present the possible content of Home Economics in schematic form, grouped under the main divisions, food, clothing, shelter, and household and institution management. The first three are subdivided primarily into selection, preparation and use, and the last into material basis, social contracts, activities and functions, and aims and results. These topics are further subdivided to suit the individual cases.

In the introduction the use of the syllabus as an aid to the teacher in selecting the content of courses of instruction for different institutions and for different grades is discussed.

In preparing this report special stress has been laid on physics, chemistry, and biology, economics, sociology, and other sciences which form the background of the complex called Home Economics, or are closely related to it.

As a whole, the syllabus makes it clear that Home Economics is a subject worthy of serious study. "Rightly combined with language, literature, and other long-established subjects, Home Economics can and does provide a well rounded college course of full cultural value and does not sacrifice anything essential to a broad education. Those who have given the subject most attention believe that, in addition, it has a special value in preparing directly for life and its problems."

The report appears as publication No. 1 for the Ellen H. Richards Memorial Fund.

Webster's International Dictionary. Boston: G. and C. Merriam Company. 1913, pp. 2700. Illus. Regular edition, \$12; India-paper, \$15.

This is a new encyclopedia-dictionary having as a special feature the divided page to provide for abbreviated treatment of unimportant and seldom-used words. Among its new definitions are those of nutrition and other Home Economics terms.

Pop Corn for the Home. By C. P. Hartley, Physiologist in Charge of Crop Investigations, and J. G. Willier Scientific Assistant, Office of Corn Investigations, Bureau of Plant Industry, pp. 13, figs. 9. U. S. Dept. Agr. Farmers' Bulletin 553. Some recipes are given.

List of References on Home Economics, and List of References on Rural Life and Culture. Department of the Interior, Bureau of Education, Washington, D. C., June, 1913.

BOOKS RECEIVED

- Nutritional Physiology.** By Percy Goldthwait Stiles. Philadelphia: W. B. Saunders Company. Pp. 271. \$1.25. By mail of the Journal, \$1.35.
- Preventive Medicine and Hygiene.** By Milton J. Rosenau, M.D. New York: D. Appleton and Company. Pp. 1074. \$6.
- The Care and Feeding of Children.** By L. Emmett Holt, M.D. New York: D. Appleton and Company. Sixth edition. \$0.75. By mail of the Journal, \$0.82.
- The Baby.** By Daniel Rollins, M.D. Boston: Whitcomb and Barrows. \$1. By mail of the Journal, \$1.08.
- How I Kept My Baby Well.** By Anna G. Moyes. Baltimore: Warwick and York. Pp. 193. \$1.25. By mail of the Journal, \$1.35.
- Around-the-World Cook Book.** By Mary Louise Barroll. New York: The Century Company. Pp. 360. \$1.50. By mail of the Journal, \$1.62.
- International Cook Book.** By Alex. Filippini. New York: Doubleday Page and Company. Pp. 1059. \$1. By mail of the Journal, \$1.20.
- The Complete Housekeeper.** By Emily Holt. New York: Doubleday Page and Company. Pp. 381. \$1. By mail of the Journal, \$1.17.
- The One-Maid Book of Cookery.** By A. E. Congreve. New York: E. P. Dutton and Company. Pp. 217. \$1. By mail of the Journal, \$1.08.
- Recipes and Menus for Fifty.** As used in the School of Domestic Science of the Boston Y. W. C. A. By Frances Lowe Smith. Boston: Whitcomb and Barrows. \$1.50. By mail of the Journal, \$1.62.
- Paper Bag Cookery.** By Nicholas Soyer. New York: Sturgis and Walton. \$0.60. By mail of the Journal, \$0.65.
- From Kitchen to Garret.** By Virginia Terhune Van de Water. New York: Sturgis and Walton. \$0.75. By mail of the Journal, \$0.84.
- Text Book on Domestic Art.** By Mrs. Ingalls. San Francisco: H. S. Crocker Company. Pp. 250. \$1.50. By mail of the Journal, \$1.65.
- Bungalows.** By Henry H. Saylor. New York: McBride, Nast and Company. \$1.50. By mail of the Journal, \$1.70.
- The Practical Garden Book.** By Liberty Hyde Bailey. New York: Macmillan and Company. \$0.50. By mail of the Journal, \$0.55.
- The Delinquent Child and the Home.** By Sophonisba Breckenridge and Edith Abbott. New York: Charities Publication Committee. Pp. 360. \$2.
- Neighborhood Entertainments.** By Renée B. Stern. New York: Sturgis and Walton. \$0.75. By mail of the Journal, \$0.84.
- Vocations for Girls.** By Mary A. Laselle and Katherine Wiley. New York: Houghton, Mifflin Company. \$0.85. By mail of the JOURNAL, \$0.90.
- Webster's International Dictionary.** Boston: G. and C. Merriam Company. Regular edition, \$12; India-paper, \$15.

NEWS FROM THE FIELD

The Seattle Home Economics Association will hold its meetings on the second Monday of each month. The program for the whole year was made out in advance and will include addresses on the following subjects: Market

Seattle Home Economics Association Regulations and their Enforcement, Vocational Guidance, Violations of the State Food Laws, The Educational Value of Home Economics, and the Work of the Industrial Centers.

They report a large membership, and progressive work along the lines of investigation and regulation of markets and food supply.

The November meeting of the Texas Home Economics Association was held in Dallas, Texas, in connection with the meeting of the State Teachers' Association. The committee, appointed last November, reported on the Constitution and By-Laws. New plans were made for the coming year and a large membership enrolled.

Texas Home Economics Association The work of the year will be almost entirely directed toward the improvement of the school courses throughout the state, raising the standard of the work, and unifying it. A committee was appointed to issue a syllabus, which will be published by the University of Texas.

The branch is looking forward to an active year in which much will be accomplished for the cause of Home Economics.

The regular meeting of the New England Home Economics Association was held at 6 Marlboro St., Boston, on December 3, Ellen H. Richards day.

After brief remarks, appropriate for the day, the program took the form of a discussion on the subject: The Cash Value of Woman's Labor in the Home, (a) Attitude of mind toward housework, (b) What manual work should a woman do in the home? Subjects such as When is it best to send out your laundry? were then discussed as suggested by the audience.

The Current Topics Committee had charge of the December meeting of the Philadelphia Home Economics Association. Miss Hanna Hill of Drexel Institute gave a very helpful list of articles to be found in the recent magazines.

Philadelphia Home Economics Association The Pure Food Committee in charge of the January meeting arranged for addresses by Mr. Charles H. La Wall, State Chemist of the Dairy and Food, and Mr. A. J. Hankell, Chief of the Division of Food Inspection.

The Missouri Association of Household Arts and Sciences met November 6 and 7 at St. Louis in connection with the State Teachers' Association. An idea of the program may be gained from the following topics: Ideals in Dress, Lessons in Laundry Work, Possibilities for Vocational Training along the Line of Domestic Science and Art, and Extent to which Universities have Accepted Home Economics Credits for Entrance.

A banquet which was held on Friday evening was most successful. About sixty attended.

At the business meeting the following officers were elected for next year: President, Miss Essie Margaret Heyle, Kansas City, Mo.; Vice-President, Miss Jennie Gilmore, St. Louis, Mo.; Secretary, Miss Jensen, St. Joseph, Mo.; Treasurer, Miss Mary Chapin, Cape Girardeau, Mo.

Plans were worked out by which the state is to be districted for the formation of local sections.

At the Fourth Annual Meeting of the American Association for Study and Prevention of Infant Mortality, held in Washington, D. C., November 14 to 17, the section on Public School Education for Preventing Infant Mortality was of special interest to Home Economics workers. Dr. Helen Putnam, Chairman of this session said: "Society in self preservation must teach women the right care of babies. Mothers are entitled at our hands to the time and the place to care for their children. Babies have the right to the care of intelligent mothers instead of being left to the care of elementary school children."

Dr. Putnam scored the "Little Mothers" movement. She said that it suggests cheating mothers and babies of each other, belittles ideals of motherhood, and imposes on little daughters duties beyond their mentality and physical ability.

Continuing the discussion, she said: "Only a small fraction of elementary school children enter high school. We must have continuation schools for our nearly twenty million young men and women between fifteen and twenty-four years of age in these strategic years when they are beginning to think about and to undertake home making. Here they can combine wage earning with education in their awakening interests and immediate needs, both to increase their economic efficiency and their knowledge of duties that cannot be fitly given in children's elementary schools.

"It is suicidal for the nation to cease educational direction of its youth before adolescence, as we have done for nine-tenths of ours. This is one reason for our indifference to the well-being of infants, for our lack of birth registration, and for our infant mortality rate whose most favorable estimate is one-third down the list of civilized nations that we distance by billions in wealth."

Others who took part in this session included Prof. Abbey L. Marlatt, Professor of Home Economics, University of Wisconsin; Mrs. Henrietta W. Calvin, Dean of the School of Domestic Science and Art, Oregon Agricultural College, Corvallis, Oregon; Miss Louise C. Lippitt; Dr. A. C. True of the Department of Agriculture; Miss Caroline Hunt; and Miss Emma Suter Jacobs, Director of Domestic Science of the Public Schools of Washington. Miss Jacobs outlined a course for continuation (vocational) schools of home making; for training mothers' helpers; for agents of the Board of Health, including the visiting nurses, sanitary inspectors, and visit-

ing housekeepers; and for future and present parenthood. Miss Marlatt gave an interesting summary, based on reports and correspondence with leading educators in this country and abroad, on the need of vocational training in schools of home making for girls of sixteen years and older.

Summing up the work of the Section on Public School Education for Preventing Infant Mortality, Dr. Putnam said: "During the last two years we have petitioned each State Board of Education to secure the appointment of a Commission on Continuation Schools of Home Making, each to study conditions and needs in its state and report effective plans for meeting them through such continuation schools and classes. We have sent reports and reprints to several thousand superintendents and other educators; and have urged the matter in several of our educational journals with largest circulation and influence. It is reasonable to believe that this educational effort has had some influence in determining the fact that, whereas four years ago almost exclusive emphasis was laid on the economic need for continuation (vocational) schools, at present the states, cities and organizations engaged in planning courses for either sex almost invariably include health and its related interests—hygiene and sanitation concerned with the vocation and with the family."

The dominant note through all of the discussion at all of the sessions was the appeal for the specialized training necessary for effective work in the fight against infant mortality. The note was first struck in the session on Nursing and Social Work when the discussion culminated in a resolution urging the training schools for nurses to include practical training for baby welfare work in their courses. It was sounded in the session on Pediatrics in the frank recognition of the fact that few of the medical schools give adequate attention to pediatrics in their required courses. It was heard again in the sessions on Obstetrics in the appeal for better training in obstetrics in the medical schools, and again in the session on Eugenics and Continuation Schools in the emphasis laid on the necessity for training for parenthood.

The meeting was held under the presidency of Dr. L. Emmett Holt of New York. The president for the current year is Dr. J. Whitridge Williams, Professor of Obstetrics, and Dean of the Johns Hopkins Medical School, Baltimore, Md.

England, Holland, and Switzerland were among the foreign governments that showed progress in accident prevention and sanitation at the First International

Exposition of Safety and Sanitation held in New York City, December 11 to 20.

First International Exposition of Safety and Sanitation The British Home Office and Board of Trade demonstrated how English factories and workshops are being made healthier and safer.

Switzerland gave full details of the Swiss method of stamping out white slavery. The exhibit from Switzerland also covered every form of industrial activity of that country including the famous labor colonies, accident prevention, workmen's insurance, first aid to the injured, war hospitals, the work of the Swiss Red Cross, home industries and school hygiene.

The Holland government sent to the Exposition a model wood-working factory, showing how the workmen are protected against the dangerous machinery and fatal dusts; also a model Holland laundry with guarded machinery.

The various problems of the day such as safety for the worker and what it means to his family, the relationship between employer and employees, welfare, benefit and compensation work, together with all forms of sanitation and hygiene for improving factory, workshop and living conditions of workers and their families were presented and discussed by eminent authorities and leaders in this work. In terms of the subjects of addresses, some of the problems presented and discussed were as follows: Industrial Accidents, Safer Shops, Human Values, Accident Prevention, Care of the Injured, Industrial Hygiene, Sanitary Welfare of Workers, Proper Food for Workers, Occupational Diseases, Factory Lighting and Ventilation, and What Accident Prevention Means to the Worker's Family.

The International Congress of Farm Women is auxiliary to the International Dry-Farming Congress, whose work for the spread of better farm methods has been felt in every nation of the world within the last few years.

The Dry-Farming Congress The eighth annual session of the International Dry-Farming Congress was held in Tulsa, Oklahoma, October 27-31, 1913, at the same time as that of the International Congress of Farm Women. Official delegates attended from twenty states, from Canada and twenty-two foreign countries.

At this meeting the Congress ratified the affiliation with the National Council of Farm Women.

One building was devoted to a complete Exposition of farm home products, which included canned fruits, vegetables, meats, pickles, butter, bread, etc. There were a number of individual and collective exhibits from counties and districts, from farm women's clubs, schools, etc., and a special department for boys' and girls' classes.

A valuable feature was an exhibit for the farm home, of time and labor saving devices which were displayed in a "model farm kitchen." Nothing was allowed that is not practical and helpful.

The Department of Agriculture was one of the exhibitors, and paid especial attention to women's interests. For instance, the Bureau of Chemistry showed material illustrating the manufacture of gelatin and a number of other food products, data regarding the composition of infant and invalid foods, and material illustrating food adulteration practices. The boys' corn club work and the girls' canning work, of the Bureau of Plant Industry, were illustrated by a large series of fine photographs. Many of the Bureaus of the Department of Agriculture have issued bulletins which are of interest to the housewife, and this material was brought together and arranged under appropriate headings. Included in this, were the bulletins issued in connection with the Nutrition Investigations, and the food and diet charts. A special exhibit was made by the Nutrition Investigations illustrating the composition and nutritive value of cowpeas and Kafir corn in comparison with Indian corn. Miss Caroline L. Hunt, of the Department of Agriculture, was present to explain this exhibit and to show housekeepers good methods of using Kafir corn and cowpeas in the diet.

The program included physical and mental betterment, social and religious life, the care of children, their food, clothing and education, home sanitation, coöperation between producer and consumer, and other similar subjects, together with vocational occupations for farm women, including dairying, poultry culture, etc.

Demonstrations in all branches of the work were carried on each day, including the actual cooking and serving of meals in a model farm kitchen.

The speakers at this Congress were notable men and women and fully two-thirds of them were farm women who have actually done the things which they described or discussed.

The American Association of Farmers' Institute Workers met in Washington, D. C., November 10 to 12. Progress is indicated by the names of some of the committees: Coöperation with other Educational Agencies, **Farmers Institute Workers** - able Schools of Agriculture, Boys' and Girls' Institutes, Women's Institutes.

In five sessions, one of which was a women's session, they discussed the farmers' problems under such headings as these: The Farm Laborer, The Tenant Farmer, The Recent Immigrant, The Rural School Teacher, The Country Pastor, and State Funds for Women's Institutes.

The National Conservation Exposition held at Knoxville, Tennessee, during September and October taught by its general plan and its minute detail, the conservation of all our national resources. It was in every sense an **National Conservation Exposition** - educational exhibit, totally lacking in side shows and booths for sellers of oriental wares.

At the entrance, the Woman's Building displayed woman's work in the home and the home labor saving devices. In the Arts and Crafts division work was shown from Pratt Institute, and such colleges as Sophie Newcomb. One wing of the building was furnished in a suite to show good taste and economy in housefurnishing together with the labor saving devices to conserve woman's strength and time. The price of the furnishing of each room was plainly displayed. Instead of having a heterogeneous mixture of jellies, pickles, and cakes sent in for prizes, each week one type of food was judged, so that the pantry shelves in this model suite were always full of attractive well cooked food.

Since so many of the primitive industries are still kept alive in Tennessee it is appropriate that the loom and wheel should have had a place beside the more modern exhibits. Here a real mountain woman explained to the ignorant city crowd the meaning and use of bobbin and flyer, of harness and treadle. When two university students showed great interest in, and ignorance of, the loom the mountain woman remarked, "Well, I ain't old as arry one o' you, and I know all about this 'ere loom, but then 'tain't everybody has the same advantages."

The University of Tennessee showed among other things a well equipped laboratory for Home Economics teaching, together with work done by the students in dietetics, in house planning, in textiles and clothing.

The health exhibit in the Liberal Arts Building was one of the best of its kind ever gotten together.

Industrial hygiene as carried out by the National Cash Register Company at the cost of six cents per person per day was shown in moving pictures and charts.

The Anti-Tuberculosis League had every device to show the use of fresh air, good food, and cleanliness as a preventative and cure for disease; and the bottle of patent cure-all flashed a death's head every few seconds to emphasize its deadly work.

The hookworm campaign, the necessity for pure drinking water, and the fight against the typhoid fly were all displayed in posters or models of the right and wrong way to live.

The flies (on wires) actually flew from their birth place in a stable to the open window of a tiny cottage, there to walk upon the table and deposit their load of filth and germs.

The Russell Sage Foundation coöperated with the Exposition Board to show agencies for Child Welfare. The social center, the vocational training, the boy scout and camp fire girl movements, juvenile court, medical inspection of school children—all agencies for the care and training of the youth of the land were brought vividly to the attention of the public.

Under the direction of Miss Pearl MacDonald, the Household Economics Committee of the Wisconsin Federation of Women's Clubs is actively engaged in work which will not only aid the city and town families but will also extend to the housewives and schools in rural districts.

Wisconsin Household Economics Committee They are placing Home Economics books and magazines in the libraries, urging women to avail themselves of the school laboratories, furnishing outlines of study to women's clubs, sending out questionnaires to principals in order to determine to what extent Home Economics is taught in the schools, and coöperating with the legislative committee to secure satisfactory pure food laws.

Richards Day, December 3, was observed in the Polytechnic School, San Francisco by an exhibit and readings by the students. Old Paisley shawls, a sampler made in 1700, Spanish lace worn a century ago, old china, books and watches were displayed. The modern contribution to the exhibit was the hats made by the girls who are to wear them when they graduate.

Richards Day Observed The readings were on the Life of Ellen H. Richards, Colonial Cooking, European Methods of Cooking, Quaker Laces, and Hints on Clothing.

A School for Housekeepers was held January 19 to 30, in the Woman's Building, University of Illinois.

Lectures were planned to give information on the house, on food, clothing and health; they included the following: The Illinois Way of Neighborhood Planting, Good and Bad Architecture and Why, Appreciation of Pictures, Some Suggestions for the Home Library, Care of the House, Good Taste in Furnishings, Why Household Science Clubs Should be Organized Among Housekeepers, System of Lighting for the Farm Home, Systems of Water Distribution in the Farm Home, Food and Its Function in the Body, Planning Meals, Food for the Sick, Care of Milk in the Home, Pure Food Legislation, Table Setting and Service, Home Canning, Rural School Lunches and Equipment, Vegetables, Food for the Child, Infant Feeding, Farm Marketing, Some Points in Dressmaking, Good Taste in Dress, Choosing Material for Clothing, Home Millinery, Health in the Home, and Home Care of the Sick.

Extension Courses in cooking and sewing will be given, beginning February 2 and continuing for four weeks. These are free, have no prerequisites and are not given for credit. Owing to the crowded conditions in the kitchens and sewing rooms, only a limited number can be received in these courses. Candidates will be assigned places in the order of their application. Preference is given to non-residents of Champaign and Urbana.

Last June the School expected to have the unusual experience of beginning this year with every one of the forty-two members of its staff of 1912-13 returning.

But during the summer one instructor changed her personal plans suddenly, marrying and going to Cuba to live. There was therefore one vacancy to be filled. This was in teaching millinery for home use, and Miss Hester B. Lyon (Mechanics Institute) was appointed. Three additions were made to the staff.

Miss Gwladys Hughes (Normal Household Arts, Pratt Institute, 1913) was appointed as assistant in dressmaking for half-time. Miss Hughes will spend part of her free time in a dressmaking establishment, in order to gain further experience in dressmaking under trade conditions. Mr. Arthur L. Guptill was appointed assistant in House Planning and Furnishing. Mr. Guptill is a graduate architect, who spends part of his time in an architect's office, and part in teaching. For this particular problem he is working under the direction of Miss Mary Quinn, the school instructor in design. Miss Wanda Broczkoski (Institutional Household Science, Pratt Institute, 1912) has been appointed in charge of the cookery supply room and as assistant in the lunchroom. In the former work she relieves an instructor to give her time for assistance to other instructors.

The School opened with the maximum possible enrollment of entering normal students—eighty, and with the same in institutional household science—forty.

The University of Illinois reports a largely increased enrollment in its Household Science Department. The new addition to the Woman's Building is practically equipped, giving increased opportunity for all lines of the work. The work formerly carried on by Miss Harriet Rinaker, now Mrs. Paul E. Howe of New York City, has been divided between Miss Florence Harrison, B.S., University of Illinois, '08, and Miss Olive Percival, B.S., University of Illinois, '10. The work in textiles, formerly given by Miss

Charlotte M. Gibbs, now Mrs. Cecil E. Baker of Chicago, is in charge of Miss Lurene Seymour, Ph.B., University of Michigan, '95, B.S., Columbia University, '12.

Miss Harrison and Miss Crigler are uniting with Miss MacKay of Iowa Agricultural College in giving demonstrations at the National Dairy Show in Chicago.

The *Survey* of December 6 in an eloquent editorial addressed to the new mayor of New York and his associates demands of them as their most important work,

“the redemption of the school system, its closer adaptation to modern needs, its efficiency and practicality, the ennobling of its aims and the constant self-scrutiny of its methods, the development of a sounder loyalty and a stronger *esprit de corps* among the teachers, a clearer recognition of the direct economic function of the schools, while not obscuring the truth that the child is above all a spiritual being

and that to starve his spiritual nature is the worst, because the most complete, race suicide. In short, a twentieth century school system—one worthy of the splendid city, equal to the gigantic need, generously conceived, adequately financed, rigidly scrutinized, popularly understood and strong in a universal affection.

"Next in importance to the schools are the health activities of the city. By discovering in infants and growing children minor physical defects, weaknesses and tendencies, and advising how they can be overcome or minimized; by controlling communicable diseases; by securing the purity of milk, meats, fruits and other food products; by scientific compilation and interpretation of vital statistics; by laboratory research and clinical study; and by a great campaign of educational propaganda on every subject of which popular knowledge will contribute to the public health, the health service will supplement the professional practice of medicine and promote the normal growth of sound hygiene in the community. This will inevitably improve the racial stock, increase the proportion of fruitful marriages, and modify continually for the better the relation between the birth rate and the death rate. More and more of those who are born will develop into vigorous long-lived adults. There will be a great reduction in the loss from disease, orphanage, premature and violent deaths, as all deaths from fevers, poisons, infections, and occupational diseases should be called."

The Naples Table Association for Promoting Laboratory Research by Women has announced the offer of a seventh prize of \$1000 for the best thesis written by a woman on a scientific subject. This thesis must embody new

The Ellen Richards Research Prize	observations and new conclusions based on independent laboratory research in biological (including psychological), chemical, or physical science.
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The theses offered in competition are to be presented to the Executive Committee of the Association and must be in the hands of the Chairman of the Committee on the Prize, Dr. Lillian Welsh, Goucher College, Baltimore, Md., before February 25, 1915. The title page of each manuscript must bear an assumed name; and the writer must send with her manuscript, a sealed envelope containing her application blank and superscribed with her assumed name.

The Association reserves the right to withhold the prize, if the theses presented are not, in the judgment of the regularly appointed Board of Examiners, or by such specialists as they may choose, of adequate merit to deserve the award.

The decision will be announced at the annual meeting in April, 1915.

In April, 1911, the prize was named the Ellen Richards Research Prize in recognition of the devoted service of Mrs. Richards as Chairman of the Committee on the Prize since its appointment in 1900.

The School Lunch Committee of the American Home Economics Association has an exhibit on School Feeding that was made originally for the Fourth International Congress on School Hygiene. This exhibit consists of

School Lunch Committee Exhibit	two five panelled screens, each panel being 3 by 6 feet. The exhibit may be borrowed by any organization that desires to use it. The charges are the expense of transportation and five dollars a screen. For further information or a picture of the exhibit apply to Miss Boughton, Stock Exchange Building, Philadelphia.
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According to the *British Food Journal*, a Pure Food and Health Society of Great Britain has recently been incorporated upon the same lines as the Royal Society for the Prevention of Cruelty to Children. The license of the Board of Trade practically establishes it as an institution authorized to supplement the work of the official Food Inspectors. It will employ a body of paid inspectors of its own, who will act as its agents in the warfare against unscrupulous food "fakers," and thus help to safeguard the public health and all honest traders. It has already been working for four years, but has labored hitherto under the difficulty of being a private society, officially unrecognized.

A distinguished educator from Columbia University who recently visited the Philippines says, in speaking of the schools, "I have visited many countries and studied the educational systems in all of them, but in no part of the world is there a system so perfectly adapted to social conditions of the people as in this country. The system here might well serve as a model to the rest of the world from the standpoint of adaptation to the needs of a country."

**Teaching
Positions—
Philippine
Islands**

An examination is announced for March 11-12, 1914, in all of the principal cities of the United States, for securing a list of eligibles from which to make selections to fill positions in the Philippine teaching service.

The places to which those appointed will be assigned are: for men, supervisors of school districts, teachers of English, mathematics, history, science, manual training, agriculture; for women, teachers of domestic science and home economy.

This is a field which requires the services of young people of superior qualifications, excellent character and good preparation; who are able to maintain a position of influence among a rapidly developing people.

This is the last examination of the present school year and those appointed will be expected to sail for Manila within the next few months, ready for the opening of the new school year.

For information relative to the nature of the service and the examination, address Bureau of Insular Affairs, Washington, D. C.

In June, 1914, there will be opened in London a tropical exposition, theoretically of a twofold nature, comprising the Fourth International Rubber and Allied Industries Exposition and one of International Cotton, Fibers, and Other Tropical Agriculture Products and Allied Industries.

**The London Ex-
position of Rub-
ber and Tropi-
cal Products**

This exposition will be held in what is unquestionably the best possible place for such an affair of world-wide interest, and both the producers of raw products and the manufacturers and dealers in both raw and finished tropical staples will have a rare opportunity to meet and compare notes in the midst of probably the finest display of this class of the world's merchantable goods the public has ever seen.

His Majesty the King of England is patron of the combined expositions, and the organizing manager is A. Staines Manders, Esq., who organized the very successful Third Rubber and Allied Industries Exhibition in New York in the summer of

1912. The president of the rubber exposition is Sir Henry S. Blake, the ex-governor of Ceylon, Bahamas, Newfoundland, Jamaica, and Hongkong. The president of the cotton, fibers, and other tropical and agricultural products exhibition is Prof. Wyndham Dunstan, director of the Imperial Institute and president of the International Association of Tropical Agriculture and Colonial Development.

The exposition will open on Wednesday, June 24, and will close on Thursday, July 9. Together with the double exposition there will be held simultaneously an international congress of tropical agriculture which will be attended by delegates from all parts of the world.

It is interesting to note that the management has decided to create a palms and palm-products section on account of the tremendous importance of the cocoanut and its rival the oil palm—not to mention nipa, buri, sago, and several of the India palms which are rapidly increasing in importance in commerce.

Owing to the efforts of The Universal Cookery and Food Association, the London County Council has established a technical cookery school for boys at the

Westminster Technical Institute, Vincent Square. S. W. J.

The London Stuart Ker, M.A., is principal. The Association has the privilege of annually nominating four boys for free admission to
County Council the school, an annual grant of £50 being made to the London
Technical Cook- the school, an annual grant of £50 being made to the London
ery School County Council for this purpose.

for Boys "The school has been established with the object of providing

a course of scientific and technical instruction for boys in all branches of cookery, pastry and confectionery. The full course of instruction will cover a period of three years, and will include the technical or professional training of the pupils under a skilled chef-instructor and the improvement of their general education. The school is equipped with a kitchen, pastry and ice-making room, larder and store rooms, fitted up with culinary appliances of the latest and most approved type."

Admission to the school is restricted to boys between fourteen and sixteen years of age who have passed the sixth standard or its equivalent.

THE Journal of Home Economics

Home, Institution, School

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Vol. VI

APRIL, 1914

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The Journal of Home Economics is published five times during the year, February, April, June, October, December, by the American Home Economics Association.

\$2.00 A YEAR. FOREIGN \$2.25. SINGLE COPIES 50 CENTS.

HOW TO REMIT. Remittances should be sent by Draft on New York, Express Order, or Postal Money Order, payable to the American Home Economics Association. Currency, unless mailed in a registered letter, is at the sender's risk.

CHANGE IN ADDRESS. Notice of change in address should be sent Two Weeks before the date of issue on which the change is to take effect. The change cannot be made unless the subscriber's Old Address is clearly indicated in addition to the New Address.

AMERICAN HOME ECONOMICS ASSOCIATION

ROLAND PARK BRANCH, BALTIMORE, MD.

Entered as second class matter at the Baltimore Post Office.

THE Journal of Home Economics

VOL. VI

APRIL, 1914

No. 2

HOME ECONOMICS AND RURAL EXTENSION¹

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University of Chicago

This discussion makes no claim to possession of any considerable technical information regarding that body of knowledge which is so rapidly giving Home Economics a recognized standing as a science. The topic is to be considered from the point of view of one who believes profoundly in the value of the achievements of science, and who believes that science has not performed its truest and fullest function until it has become dynamic and effective in the daily activities of those who compose the masses of our population. Science is constantly striving to rationalize in the minds of men the phenomena and processes of nature which are now occurring or which may be induced to occur; but far more than this, science must utilize its rationale of nature in the practices of men. Men who have discovered or have approximated the rationale of nature and organized her phenomena, processes, and laws into coherent sequences have produced our tangible evidence of science. But this sort of science, though fundamental, is essentially static. It becomes dynamic when it has come into the lives of the world's workers and has rationalized their daily relations with nature and natural resources.

When Robinson Crusoe and his man Friday were left alone upon the unknown island, they suddenly came squarely face to face with the necessity of securing food, shelter, and happiness from their new surroundings. Each man, guided by his own previous experiences,

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

DEPARTMENT

began to interpret the possibilities of the environment. Friday saw terrifying dangers hiding in the shadows, but Crusoe took command of the natural resources of the island and by means of goat and fire provided food and prepared shelter and conveniences which increased the comfort and happiness of both men. Friday, devoid of antecedents which led him to face nature, analyze her factors and turn them to his uses, was in sharp contrast with Crusoe, whose attitude and training enabled him to minister to his wants in a new region. Furthermore, Friday, unable to order affairs for himself, became an assistant in executing the plans made by the better trained Crusoe. Relative independence and production of comforts and happiness nowadays depend in general upon ability to use knowledge in definite intelligent ways, toward definite, intelligent and worthy ends. The present demand upon science is that it become dynamic and purposeful in common affairs, as well as special and intensive in the researches of the differentiated fields of science. We should therefore consider the inherently intimate relation of science to more purposeful rural education.

THE RURAL SITUATION

1. Agriculture. In our splendid advance in developing purposeful education in rural districts, attention has been focused upon agriculture, and upon those phases of agriculture which deal with larger and better productivity, diminishing cost and waste of materials produced, and conservation of resources for future production. This was logical, perhaps, since without production and conservation all else fails in rural life as elsewhere, but we always need to count the cost at which increased production is secured. In 1910, boys in a number of southern states entered into a contest to see how much corn they could grow upon one acre of ground. Their acreage yield at the close of the contest was found to range from $83\frac{1}{2}$ bushels to $228\frac{3}{4}$ bushels. But the cost of production ranged from 8 cents per bushel to 49 cents per bushel. One boy produced 119 bushels at a cost of 8 cents per bushel, while the boy producing $228\frac{3}{4}$ bushels incurred a cost of 43 cents per bushel and one producing $83\frac{3}{4}$ bushels incurred a cost of 49 cents per bushel.

Because of the fact that productive agriculture has had chief emphasis by those who are advocating better things in rural education, productivity may have been advanced but possibly at a high cost, or at least no large gain to rural life. Agricultural education is recognizing

its larger functions, and is turning its attention, not away from productivity of farms, but toward betterment of rural life. Fundamentally farming advances when rural people are better and happier. That farm productivity depends upon the farm home is more fundamentally true than is even yet generally recognized. One case will serve as a typical illustration of many cases of farm productivity at too great a cost. On a small Indiana farm is a farmer 54 years of age, a man known for his good farming methods, and his ability to produce, feed, and market good farm animals. But the inefficient home, involving poor food, irregular hours for meals (sometimes their omission), no ventilation at night, and doors open with passive welcome to poultry in the daytime, financial penury in home expenditure, at times, and prodigality at others, unhygienic personal habits, were factors which led to disease; and of a family of five members, but two, the farmer and one son, are left. His time and energy for making his farm productive, and his interest in doing so have been well-nigh removed because of the failure in which he seems to bear a large measure of responsibility.

2. *Home Efficiency in Rural Life.* The present situation relative to efficiency of rural homes shows conditions as diverse as those in agricultural productivity. Our general knowledge and the exact information presented to us by rural surveys in Minnesota, Wisconsin, Ohio, New York and elsewhere present in a striking way, facts relative to home efficiency, facts which were already known in part, but are now more insistent for attention because more universal than our individual experiences had taught us to regard them. Similar facts are known relative to the conditions in city homes, but it is not particularly helpful to deal in comparisons of country and city homes.

Quite recently a party of students, who planned to spend the night in camp in the vicinity of their field studies, had great difficulty in finding a farm house where they could purchase bread, butter, eggs, and potatoes to supply their needs. The region certainly did not represent typical farm homes, but since the supporting industries in the locality in question were agriculture, orcharding, gardening, and dairying, it seemed reasonable to suppose that satisfactory supplies could be easily secured. After approaching four homes and being turned away, either by the refusal of the occupants or the unclean and unhygienic conditions of the household, they were forced to be satisfied with hard bread at ten cents a loaf, butter too strong to be disturbed, a few potatoes, and two dozen eggs which represented

several days' collections from a large number of hens. The case is an extreme one and by no means typical, for, grading from country homes of this illustration, there is an increasing efficiency of farm homes reaching up to as attractive and efficient as exist in country or city. But the need of modern science in home management is very evident.

3. *The Rural School.* Various publications and the individual experiences of many of us, show that the rural school situation is in general the most stagnant and static part of our whole educational system, and is also one of the points for most strategic and hopeful attack now open to educational people. In a recent bulletin on the Status of Rural Education in the United States,² we are told that "few realize the magnitude of the rural educational problem now before us. It is not generally known that illiteracy in rural territory is twice as great as in urban territory. This is in spite of the fact that thousands of illiterate immigrants are crowded into the great manufacturing and industrial centers. The illiteracy among native-born children of native parentage is more than three times as great as among native children of foreign parentage, largely on account of the lack of opportunities for education in rural America, in which comparatively few immigrants live. Few know that approximately 62 per cent of the total school enrollment is in rural schools, but that the rural aggregate attendance is 51 per cent of the total aggregate attendance; that about 60 per cent of those in rural schools are in one-teacher country school houses, and that the instructional work in the average one-teacher country school is of very low grade." In one district school during the year just closed there were gathered the pupils from four school districts, aggregating 52 pupils. Thirty years ago from the limits of the one central district there came almost as many pupils. These pupils in the consolidated school were taught last year by one teacher, a young girl, who in inefficiency and limited educational outlook and enthusiasm, is typical of a tragically large number of first-year, one-room-school teachers throughout the United States. This number of first-year rural teachers is estimated to be annually almost one-third of the whole number of rural teachers. In 32 states there are 147,227 one-room-school teachers. In 21 states there are 3,621,278 pupils in one-room schools. When we think of the fact that almost one-third of these pupils are taught by teachers who too often are young and inexperienced, often teaching their

²U. S. Bur. Education Bul. 515.

first and only school year with no serious purpose of making life better and more worthwhile to those who live in their school community, the situation in its complexity begins to appear.

Consolidation of country schools may result in bringing together pupils from several districts so that their work may be better graded, and that fewer classes may be assigned to one teacher. It may result in socializing the school, and enabling it to serve as a community center of interests; or it may result merely in bringing together in one room the pupils who previously had been in two or more districts, and may bring no educational advantage except possibly that of the association of large numbers of pupils.

Another changing feature of the rural school situation is also in point. Up to the present our foreign immigration has served to swell the urban population and to complicate urban educational problems. The present tendency seems to be for more of our immigrants to go into rural communities. While the percentage of rural illiteracy exceeds that of the city, the city's good showing seems to be due to its better educational system. When the percentage of immigrants in the country has increased, if present rural education is unchanged, we should expect an increase in rural illiteracy. Without attempting to discuss the many reasons for the present situation in rural schools, certain demands for the increased efficiency of the school in rural life need to be considered. The school problem represents a level of instruction that is not far from that which it had a half-century ago. But industrial life, agriculture, sanitation, home betterment, and city education have moved forward and have left the country school in essentially its old position. Rural social conditions have changed and the school has not met the new conditions. Bodies of knowledge relative to rural industrial and home life have developed, but the school still deals chiefly with the old bodies of knowledge, though much of their content has ceased to be purposeful in rural life. The rural citizens in some localities have come to regard the rural school as a factor extraneous to the business of the farm and home. They send their children to school often because of traditional belief that it is a good thing to do, but with increasing frequency they are inquiring about the results of the school's work. Many, probably most of them, are ambitious to send their children to the city schools where a more effective education is given, but one which does not often fit for country life either in content of material studied, or in belief in the desirability of living a rural life. Rural teachers have increased

their training for their work less rapidly than other teachers, the standing of the rural teacher in the rural community has changed greatly, since the school's work has not progressed in proportion to the agricultural conditions and rural conveniences. Indeed, it seems probable that there has been an actual decrease in efficiency of rural teachers in many parts of the country. A generation ago the salary paid for rural teaching, while actually less than that now paid was more than it now is when measured in terms of its purchasing power. It was also larger in relation to salaries paid for other kinds of work than it is now. Even in one of our largest universities an efficient, paid assistant recently asked for leave of absence for six months, saying that he wished to follow his trade of bricklaying in order to accumulate some money by means of which he could carry on his research when he should return to the university at the end of the six months' absence.

The rural school salaries, together with other causes, have done much to eliminate men from the schools, and to hasten the passage of better trained women to the city schools and to business. Elimination of the men is especially serious to rural education, since these men were more likely to possess the means of relating school to farm life. Furthermore, changes in rural social and economic conditions, and in teachers themselves have brought a discontinuance of the beneficent old-fashioned evening in the home, when teacher, pupils and parents discussed community affairs together. Such an evening nowadays is rare, and would probably seem equally strange to teacher, parents and pupils.

The situation just described represents the usual one in the United States, but there are numerous oases in this arid region. These oases are conspicuous because of the introduction of one type of work, namely, that which arises from practices and problems of the home life of the pupils and their parents. One rural school has a teacher who lives on a small farm near the school house. Upon the school ground he and his pupils have constructed a poultry house in which a small number of hens are well kept. The pupils and the other residents of the school district have discovered that there is a highly interesting body of knowledge about poultry—knowledge entirely worthy of the attention of intelligent persons. Another one-room school conducts a pupils' baking contest, and the standard of bread making in the district has improved. Many other schools here and there throughout the country are vitalizing their work by using and

dignifying and rationalizing rural practices both on the farm and in the home.

Such features of the content of school work present the best basis for arithmetic and for language because the problems and descriptions are real and not imposed. The history of peaceful pursuits contributes more to belief in rural life than the history of warfare. The story of house building if adequately told is as interesting as that of building a warship, and immeasurably more practical, and more calculated to lead to attempts to build good homes. Furthermore, since rural teaching is now done so largely by women it seems logical and imperative that problems in home betterment should supply much of the material for vitalizing rural school education. There is no inherent educational reason why rural schools should not use the material which seem worth while to the pupils, and there are many educational reasons why the schools should use such material.

Even if there are numerous schools now vitalizing their work and beginning to give to the country boy and girl the kind of rural education that they need, at least two major difficulties remain. First, most rural teachers and communities do not have the educational outlook which will enable them soon to incorporate into their own schools the types of reorganization that have proved beneficial. There is serious need of thorough and definite constructive reorganization of the rural school course of study upon the basis of rural life. Some of the hopeful experiments cited are of sufficiently comprehensive nature to give a good foundation for this general reorganization. Secondly, an even greater immediate difficulty rests in the fact that with effective schools, the practices of the home are quite often very hard to reach. Most housewives regard themselves as fairly good housekeepers, and the shortcomings and traditions of the school are such that it is not easy to secure general coöperation of teacher, pupil, and parent. We can not wait until those now in the schools will be the men and women of the homes, even granting the questionable point that the rural school will soon be giving dynamic education to its boys and girls. The homes as they now are, with their conservative adult members as well as boys and girls, must be reached, and what is known about making more efficient homes must be made available to those who can not or will not be helped directly through the schools. This must be done for the direct benefit to the adults; and if not done for them, their influence on what the schools may do for their children may make it more difficult to secure effective results.

METHODS OF EXTENSION WORK IN HOME BETTERMENT

1. *Extension Through Those Who have Studied at Educational Centers.* When we turn attention especially to methods of extension work for home improvement it must be noted at the outset that one of the oldest and most effective methods of agricultural extension is by means of persons who have studied at educational centers and then returned to rural situations. If they introduce new, better and more rational practices, their neighbors, at first often incredulous or adversely critical, eventually do likewise. But we must remember that these better trained members of the community are rarely interested in educating others to better ways, and, not feeling a duty to others, may even be conservative regarding extending helpful knowledge.

2. *Bringing People to Educational Centers.* Agriculture, by means of its short courses for farmers, led the way for similarly planned short courses in home making. The extensive and intensive value of these courses no one can estimate. The intelligent instructor knows that he has before him in his short course practical women who, like the tiller of the soil, has her own more or less established practices, and that to influence these women they must be convinced by clear, direct facts, usually associated with a demonstration of the process and product under discussion. One of the best results of the short course in agriculture and Home Economics is the positive demand upon the instructor to select those things from his subject that are worth while for common knowledge and to present those things so that they may be clear and may appeal to persons who are not technically trained in the field. The demonstrator can not say as sometimes used to be said in laboratories of science, "The experiment does not work but the principles hold just the same." The experiment, or demonstration, must work and the product must stand the test. Again we must recall, however, that those who take the short courses in agriculture and Home Economics are those already most progressive in their communities.

3. *Moving the Educational Center to the People.* The growing popularity of various attempts, in one form and another, toward moving the educational work to the people is best illustrated in the corn trains, cotton trains, etc. Rural extension in home making is also fostered in the same way. The University of Minnesota's moving camps of university instructors are of striking interest. But these

train and camp activities are more in the nature of relatively disconnected suggestions and valuable stimulation of desire for regular instruction than of the kind of activity ultimately to be sought through rural extension. We need more prolonged contact and more permanent results than seem likely to follow from special trains and camps.

4. *Publications Sent to Rural People.* One of the oldest and most effective agencies for rural extension in agriculture, horticulture and gardening is the system of publishing and distributing pamphlets direct to those who care to receive them. In this as in most other movements toward rural betterment Cornell University is the country's leader; their pamphlets now averaging one and one-half per week are constantly carrying direct to the people helpful material of many kinds. The increasing rural confidence in the publications from centers of rural education constantly imposes tasks of more serious nature upon those who prepare these publications. Farmers and their wives, when awakened to possibilities of rural betterment, must not be misled and discouraged by following dogmatic directions regarding practices which are not applicable, or which are still in an experimental stage. Those extension bulletins which have led to intelligent experiment in the work of farm men and women have been productive of much good and those who prepare extension publications need the note of warning that is ultimately far more helpful to maintain the experimental attitude except in those causes where adequate verifications justify specific formulae for action.

5. *Permanent Demonstration Centers.* In agriculture it has been found helpful to establish many local demonstration centers. There seems to be no prohibitive reason why educational agencies should not also establish home making centers, semi-public homes managed by the state as a means of demonstrating the science of home making. No doubt types of difficulties would arise which do not inhere in agricultural and horticultural demonstrations, but if it is reasonably clear that the desired results may be secured the difficulties may be met.

6. *Bureau to Keep in Touch with Each Family.* All of the above extension agencies, however, are less definite than are needful, less certain of bringing the desired response in the home, and it seems that a new type of rural extension is needed in order to affect home life most vitally; this is needed also as a means of utilizing more completely the extension agencies now being used. If there might

be a central bureau for the state, or in each district or a group of districts in large states, this bureau might serve many important functions in rural extension. It should collect data regarding the home life throughout its entire district, so that the real needs are adequately known. Such a function is already served in part by one or two extension centers, notably Cornell, and by various local surveys. This bureau should be a means of constant intelligent relations between the educational center and each family within the territory covered. But this intelligent relation could not be established merely upon the basis of abstract, categorically gathered facts about the needs of the homes in the territory, for genuine sympathy and understanding of rural life is essential to the first steps in securing the desired intelligence. Genuine sympathy and intelligent coöperation can be established only by visits from field workers. Obviously field workers are rare who possess the proper personality, proper knowledge, proper ideals, proper ability, to gain a welcome entrance within the walls of restricted homes, and when once welcomed, to elicit the desire on the part of the persons within the home for the kind of assistance that the state wishes to give. If teachers of Home Economics and agriculture are really serious about making their material dynamic there must be an increase in the number of workers who can accomplish this most difficult task. It is one thing to discover a scientific truth—it is another thing and the ultimate one, the real one to make that truth fruitful in making life better and more purposefully productive. Our center of education must face the problem of developing persons who can effectively carry out this work. The difficulties are doubtless very great, but the opportunity for good is not measured by these difficulties, as has been shown by the few who are already engaged in this work.

Such a central bureau as that suggested would need many careful surveys of rural life, some of which have already appeared. The survey would guide the proposed bureau in individual home work. Also, the bureau would be thus guided in calling upon its coöperating academic and practical departments for exactly the kind of material needed.

Our extension activities have already done much good, but when we count the good in terms of what is still to be done, we should allow our relatively successful past experiences to guide us into new plans for meeting the whole rural situation. The cost of such a bureau of extension would be great. So is the cost of war. The world spent

last year at least \$2,250,000,000 for armament in one form and another. This sum exceeds, annually, we are told, the total sum expended upon the college courses of all young men and women who have been graduated from all colleges of all lands since college education began. In the face of these facts we dare ask for the best young men and women of the country with adequate funds to carry on the enlargements of peaceful pursuits and the life that is more permanently satisfying to intelligent, progressive people.

AGENCIES AT WORK IN NEW YORK STATE FOR THE BETTERMENT OF FOOD CONDITIONS¹

SUSANNAH USHER

There is, at present, a popular interest in the production, distribution, purity, and price of food; but few people make practical use of the agencies that would help them in an intelligent understanding of the subject.

Since this study is an attempt to state some of the agencies that may be called to one's aid in New York, the state and municipal departments have been given more emphasis than those connected with the federal government.

A new Federal Bureau of Markets has been created in the Department of Agriculture, which, before outlining a policy, intends to make a study of rural conditions.

A National and an International Federation of Farm Women are also studying rural problems.

We may expect these lines of work to have a wide significance from the standpoint of intelligent coöperation among producers, and between producers and consumers.

In New York City information may be procured from various state and municipal departments to which every citizen has a right to refer.

The City Board of Health publishes a sanitary code, and bulletins, such as the following: "The Milk Supply of New York City and its Control by the Department of Health," and "Pasteurization of Milk with Suggestions as to Methods and Apparatus to be Employed." Last spring the Board of Health opened a permanent exhibit at the Museum of Natural History, which will be a center for the dissemination of information to the public.

¹ This study was begun January, 1913.

The Bureau of Weights and Measures issues a pamphlet, entitled "What the Purchasing Public Should Know," and has its offices open at convenient hours for consultation, and for testing the accuracy of scales.

Mrs. Elmer Black, a member of the advisory board of the New York Terminal Market Commission, has published a pamphlet on "Some Observations, Comments, and Comparisons of European Markets." This pamphlet emphasizes the fact that much of our high cost of living is due "primarily to economic waste in the transportation of food products, and secondarily to our systems of distribution."

The Mayor's Market Commission held hearings during last winter, but its report is not ready for distribution. According to reports in the public press, the commission has found the market facilities in New York antiquated and cumbersome. The remedy suggested is, "that large terminal markets be established in each borough which shall be equipped with facilities for distributing at wholesale to dealers, and for supplying the public at retail. But the main thing is to so deliver the food supplies that the retailer will be able to sell more cheaply to the consumers, for the greatest number of people have neither the time nor desire to travel any great distance to do their own marketing, and take such things to their homes."

A committee has, also, been at work on the push cart problem, and has recommended that push cart peddling in the streets be prohibited, and that permanent shelter be found for them on property owned by the city.

The State Board of Health is undergoing reorganization, and so the new sanitary code promulgated by the Public Health Council has not yet been adopted, but the annual report for 1912 gives an idea of the work undertaken by the department. It is interesting to note that it inspects summer resorts, and gives information about the milk, water, and ice supply.

The laboratory of the State Board of Health has made special reports on purity of foods. The reports state that "the ten months' clause in the cold storage law is complied with—the result being that large quantities of foods are placed on the market which would otherwise be held for longer periods." Investigation has been made into shell fish pollution in Jamaica Bay, also special examination of oyster "floating" places and storage boxes. The health department publishes a monthly bulletin and holds exhibits at state fairs.

The State Agricultural Department has charge of the pure food work, and publishes information for distribution. Under a new law the Commission of Agriculture is given charge of the bonding and licensing of commission merchants.

During the 1913 session of the state legislature a number of new laws were enacted relating to the food question. The reorganization of the State Department of Health under a new law gives the health commissioner increased powers over cold storage plants, including licensing power after inspection of warehouse, and he also has the power to inspect the kitchens of all hotels, restaurants and other public places.

The State Factory Investigating Commission after two years' work drafted thirty-two bills which covered the following subjects: Reorganization of the Labor Department, prohibition of child labor in canneries, sanitation of factories, fire hazard, prohibition of cellar bakeries, and revision of bakery laws. The passing of the bills relating to clean factories and bakeries is a step forward toward the production of food under sanitary conditions.

The New York legislature has passed a bill, similar to the federal food and drugs act, which is designed to protect the public from insufficient weights and measures of package contents. The New York act prescribes "Method of sale of certain commodities; certain sizes of containers when used for vegetables, produce, and fruit; and net weight contents of containers to be indicated on outside thereof."

As a result of the work of the State Food Investigating Commission, several bills concerning the creation of coöperative companies, agricultural, coöperative banks, and bonding of commission merchants, became laws. These laws enable coöperative companies to be formed in New York State "under uniform and secure methods," and by aiding in the solution of the problem of food production and distribution they will benefit both farmers and commission merchants.

The sale of milk has been safe-guarded by an act of the legislature pertaining to unclean receptacles and places for keeping milk, and licensing of milk-gathering stations where milk is bought.

A "Report of the Committee on Markets, Prices, and Costs of the New York State Food Investigating Commission" states that "there has been little work on economic lines looking to lower costs, and to the influence of inadequate and uneconomical market facilities as a

factor in raising the price of food products. The work of the committee has been to make such a study."

The New York State Grange has a standing committee for the consideration of food production and distribution which may have something definite to report at the next annual meeting.

The Committee on Purity of Articles of Commerce of the Conference of Commissioners on Uniform State Laws is at work on a uniform Cold Storage Law which in many respects will be along the lines of the Massachusetts Law.

The formation of the Medical Milk Commissions began in 1890 when the Medical Society of New Jersey made an effort to improve the milk supply. The outgrowth of this effort was the Medical Milk Commission of Essex County, N. J. The interest spread to other states and made advisable the formation of the American Association of Medical Milk Commissions. The object of these commissions is to produce "certified milk," *i.e.*, clean, wholesome milk; and they have been influential in improving the general milk supply.

"Certified Milk" for New York City is produced under the supervision of the committees appointed by the Medical Society of the County of New York and the County of Kings.

The New York Milk Committee was organized by the New York Association for the Improvement of the Conditions of the Poor in 1906, and incorporated as a separate enterprise in 1910. The four cardinal points in the Milk Committee's campaign are: Education of mothers in the care and feeding of babies, clean milk, milk standards, and coöperation between public and private agencies.

The Milk Committee has to its credit the organization of the National Commission on Milk Standards, whose first report was printed in the Public Health Report of the Public Health and Marine Hospital Service of the United States. Another offshoot of the New York Milk Committee is the New York Dairy Demonstration Company which aims to produce certified milk at a reasonable price.

The committee investigated the character of the milk sold in hotels and restaurants and found the bacterial count in some cases very high. The interest of the managers and proprietors was so awakened that they formed a Pure Food Association whose object is to improve the quality of food served in public places.

The Society for the Improvement of the Condition of the Poor has added a new department of Social Welfare, which, after studying

food conditions, will outline a scheme that will coöperate with, but not duplicate the work of the consumers.

The Food Committee of the Consumers League has been active in the campaign to protect food offered for sale from dust and flies. It helped the State Factory Investigating Commission in its work for clean bakeries, and, at a public hearing of the commission, advocated the following: "All windows and doors of bakeries to be screened; one department responsible for inspection; new cellar bakeries to be prohibited as in Chicago, Providence and other large cities." The committee does educational work by talks on food, exhibits, distribution of literature, and the publication of magazine articles.

Among the newer organizations are the Housewives' League and the Daily Food Alliance. The Housewives' League lays particular stress on market conditions and legislation. The Daily Food Alliance has for its platform, "pure food, full weight and measure, and sanitation."

The Woman's Municipal League has not spent much time on the food problem, but it has worked for better bakeries, and has inspected the food stands in the public parks. Last April the League was invited to participate in a conference on the "Cost of Living" to be held under the auspices of the American Academy of Political and Social Sciences.

The National Civic Federation has a pure food and drug department whose "object is to promote uniform legislation on this subject among the states, to work for effective coöperation between state and federal government, and to demand better enforcement of existing laws," etc.

The Fly Fighting Committee of the American Civic Association is doing good work for more sanitary food.

This article will not attempt to consider the steadily growing coöperative movement which will soon be a factor in reducing the cost of living.

Few people have time or desire to consult all the sources of aid at their command. A need is felt for different centers that would act as clearing houses for information relating to food in its various aspects, and permanent exhibits which would make this information more concrete and valuable. These are necessary, as the basis of success of all agencies working for the improvement of food conditions is the education of the people.

DUTY OF THE HOME AND SCHOOL CLUBS IN HELP- ING THE HOME ECONOMICS COURSES IN HIGH SCHOOLS¹

MARY HINMAN ABEL

We are told that there are now well-equipped Home Economics departments in high schools that are not used to their capacity because where the course is elective many girls do not take it, choosing in some cases a study hour instead, which will free their evenings for pleasure. This would seem to be a proper case for consideration in a Home and School Club. Is the right influence being exerted at home to induce the girl to take the Home Economics courses? In our new appreciation of the wise hints to be found in young inclinations and desires, are we in danger of giving up all effort to put at their disposal the benefit of our life experience?

A man was known to say, "I am not going to advise my boy about his profession. I don't want him saying to me some day, 'You advised me to take up what I've failed in.'" Such an attitude seems to be a cowardly shirking of our responsibilities. We must run the risk, if risk there be, in helping them to understand themselves and the conditions they will probably meet in life. Then with the utmost patience we must see them make a try, often futile, at perhaps widely different occupations to find what fits them. Because a boy is clever with tools we cannot at once conclude that he is to be a machinist. He may have a stronger bent in some artistic direction, maybe as an actor or journalist if given a chance to find himself. Most of us want to do our work in the world if we can find it. What seems to be laziness is often lack of interest or the friction which comes when our job is a bad fit: a boy who is a born scholar held to digging holes for fence posts; a man who loves monotony forced into the sharp current of events, as a timid son put at the head of a bank because his father owns most of the stock. A change is sometimes magical in its results. A woman who was a failure as a cook went into a laundry. She was as happy as the day is long. "All I have to do is just smooth back and forth," she said. On the other hand a boy full of force and inventiveness was heard to say, "I just hate this lathe I have to watch, it never wants anything all day but oil," and so it goes, round pegs in square holes. But in how many cases it is not so much that the job is a bad fit as

¹ Given before the Mother's Club of Baltimore, January 14, 1914.

that the workers have not been taught to see the possibilities of interest in the work and its bearing on their lives.

With the attention now given to play there is little need to be afraid that our young people will not have what they call a good time, it is almost fun enough to be young; but those splendid years between thirty and sixty ought to be full of health and power and joyous activities while they will be far otherwise if youth is not well spent. Life is going to be longer than the youth can believe, and much more interesting and there need be no gray, faded waiting for death even at seventy.

It cannot be denied that it is harder to help a girl than a boy to train for life; modern industrial changes have affected them more profoundly. In the last fifty years over 300 occupations have been opened to women and there are said to be 6,000,000 women in this country earning their living outside the home. There is every reason to think that these occupations offer a valuable training in accuracy, in breadth of mind and in understanding of the world we live in, but most of us feel that a few years only are needed to give this training and to insure a means of self support when taken up later in life, and that the woman finds her fullest development as an individual and a citizen in the home. How prepare for this complex life? Only by giving the girl early to understand this double function, also that she must train for the duties of this home, and earn and save for it just as her brother does. There is everywhere a demand that women should be paid as much as men for the same work. Then they should certainly expect to work and save for that home-to-be. They can then venture on a marriage which would otherwise be imprudent.

In European countries this is taken for granted. The wealthy girl has her dowry, the working girl her savings to help set up the home; here the girl too often looks on all she earns as her own to spend now and as she pleases. A girl in a northern town who was earning \$1500, was asked why she spent this all on dress and travel, instead of saving for her home. She is what is called an advanced woman, but she expected the man to attend to that. It is a well known fact that economic pressure—the lengthening time required for preparation for every profession—is pushing forward the time for marriage. Now that women have the chance to earn they must also save for the home they will want whether they think so now or not. If they do not marry there will be relatives or friends to gather around them and there are always children to adopt. It is not easy without seeming sentimental to say what the home has meant to the race. Who does not know old

houses that have sheltered four or more generations? Their ample rooms, their garrets where children who are now gray haired men and women have played hide and seek are full of delightful whispers of the past. Were you ever homesick as a child? One realizes then the blessed meaning of those sheltering arms of home. Now a woman can make a home, a man cannot. If every woman would stop and realize that this precious thing is with her to make and keep or it does not exist, would she not count any sacrifice small for its attainment?

Probably sentiment in the marriage relation would be better served in the end if girls were taught to take a more open-eyed, responsible view of marriage. A girl ought to say to herself: "This man I am going to marry is healthy, moral and efficient and I am fond of him, or I would not have accepted him. Together we are embarked on what Arnold Bennett has called the Great Adventure. It has in it difficulties and risks but also great and sweet rewards, and it is our part in the world's work. We are going to found a home and I must not think so much about happiness; it will come if I can make an all round success. This man's good qualities I can enhance, I can help him become more efficient in body, mind and spirit, if I build up around him a happy home. This is my job and I am going to throw myself into it as whole heartedly as did my great-grandmother when she helped her man to found a home in the wilderness."

This home cannot reach its spiritual ends unless its practical requirements are met. It cannot teach the children habits of order and give forth a spirit of peace and harmony if the furniture that has been chosen is an incongruous lot, and the contents of drawers and cupboards are in confusion. It cannot teach the young people to care for their health if the food is not properly chosen and cooked. It cannot be fair to the money earners of the group unless good ethical and economic standards obtain for the spending of the income, unless there are honest dealings with each; there is little sweetness and light in any household whose mistress is worn and harassed because she has never conquered her work by learning to save steps, to choose proper implements, to get a new window in the kitchen if she needs it.

A young girl, too much petted and shielded, said, "What is this Domestic Science? Keeping flowers in the vases, I suppose, and all that?" It was significant that she said "and all that" for it showed some glimmer of an idea that a woman has her work in the world as much as a man and it is not all keeping flowers in vases. Why, we have forgotten in the new ease of the last generation that before us lie

stretches of time when all women worked, when only queens were idle. See the proofs in Mt. Vernon of the activities of Martha Washington, the first lady of the land. A woman must work for her home before and after or meet failure in a matter very essential to happiness. We do not spare the man. The burden of the support of the family is laid on him for life.

What is meant by the new housekeeping to which reference has been made? Simply that science is being applied to this long belated industry, showing better methods, offering new appliances and suggesting a boundless field for improvement. First of all this makes the work interesting and takes away the feeling of drudgery which attends unmeaning repetition. Indeed, housework is the most interesting work in the world and precisely because it is not finished, not all cut and dried in its methods, but constantly growing and adjusting itself to to growing knowledge and our daily needs. Any woman in any house can, by taking thought, find an interesting field for her inventiveness. Why does her arm get tired at the ironing board? Suppose she stops and considers instead of continuing to place that ironing board between the same two tables that generations have used before for the purpose. If she finds that the board is too high she should lower it so that it will give a better "purchase." If she counts the needless steps in a too large kitchen she can draw an imaginary line diagonally between two corners and call one triangle laundry and forget it except on Mondays, and then place the mixing table and shelves on the kitchen side of that imaginary line in the center of the room and near the stove and sink. By this change miles a week are saved; by reading the twelve rules for shop efficiency drawn up by Mr. Harrington Emerson,² she can find other applications, and it all becomes an exciting business indeed.

Note that hints like this have to come to her from outside, just as the bricklayer had to hear from this same Mr. Emerson that he could lay twice as many bricks in a day if the bricks were properly sorted and piled by cheaper labor and put level to his hand. Our workshop end of the house is not fitted out as an experimental laboratory nor have we time or training to run one. Some one else must find out good ways for us and give us the results. For instance, we may make jelly once a year, and if "the jelly will not jell" we forget by the next summer what little light we had on that problem. But a young woman in

²Twelve Principles of Efficiency. By Harrington Emerson. New York: Engineering Magazine Co., 1912.

the Home Economics Department of the University of Illinois³ spends three months on jelly making with the juice of many kinds of fruits—green, half ripe, and ripe, picked before a rain and after a rain, boiled without sugar, boiled with one quarter its bulk of sugar, one half, three quarters and equal bulk, and the results are weighed, analysed, described and photographed, and then tested by others; and finally, in a little pamphlet is written the whole history of jelly making for our benefit; if we fail again it is our fault. This is a good illustration of the relation between the home industries and organized knowledge in educational courses. Or, suppose we need to know what is the most economical fuel for cooking—gas, kerosene or alcohol. This question was asked of a woman who was demonstrating an alcohol stove in a department store. “Well, I can’t tell you exactly,” she replied, “but a man was in here who had one of these burners. He’s a man who goes to work early and he gets his own breakfast and he told me his teakettle, and its larger than this one, boiled in just no time!” A much wiser person might have given no better answer. That question requires for its settlement instruments of precision to be found only in laboratories. All such work is at the disposal of the teachers of Home Economics. We can learn only from trained people the best methods in these household arts. By dint of practice the older generation has learned much, but practice added to the newer views will go further. The new word is not tradition, but knowledge.

There are those who say that it is all nonsense to train in cookery and the household arts in general. They are all going to follow the soap making and spinning and weaving out of the house. For twenty-five years we have watched for that going out and have failed to see much effect on the processes that are most intimate to the family comfort and well-being. Two influences have been at work to falsify those early predictions.

First. Our growing knowledge of hygiene makes us fear to use the product of uninspected bakeries, and cooked food depots, and laundries, and for the most part they have not kept their promise as to reducing prices to where the home cannot compete, nor has the all-important problem of hot delivery of food been satisfactorily settled.

Second. Labor-saving devices have been improved far beyond the expectations of twenty years ago and the use of electricity and gas for

³ Principles of Jelly Making, *U. of Ill. Bul.* vol. vii, no. 7.

cooking has still further lightened the housewife's task. Everywhere houses are better planned for the work to be done in them. It seems very nearly certain that much of the cooking, the lighter laundry work, and the care of children will all be done in this coming generation in the individual home. First, for the sake of economy; during the years when the mother cannot add to the income she must help to save it. Second. Because these processes, especially cookery, are so intimately connected with the health and comfort of the family that they need close personal oversight; we cannot in most cases trust the so-called expert. Third. Because there was never devised such an educational plant as the household industries present. Here children may see the principles of physics and chemistry applied, such as the nature of heat and its application; here obtain such a knowledge of food and the simplest processes of cookery as every human being should possess for self preservation; here learn a thousand lessons in neatness, precision, observation, cleanliness and its need. But the mother must be well trained in order to do this teaching.

It must be remembered that habits which tend to conserve health and morality are learned very early or with difficulty or not at all. Children are quick to see what methods are made up for their education as kindergarten games, and what are a vital part of daily existence, making those they love happy, clean and comfortable. They prefer the real thing if too heavy tasks are not connected with it. Our girls must attend Home Economics courses because the methods are constantly changing and improving, and the mother at home, even if she has time and the talent for teaching, may not know the best ways. In the cases where girls dislike housework, it is mainly because they rebel at old fashioned methods, too laborious and unintelligent—no one has shown them how much ingenuity and thought can vary and improve the work—and because they do not realize, young as they are, what a tremendously important thing it is for the community and for their own happiness and development to found and keep a home. When they do, the courage that is in all of them will rise to the task. As one young housekeeper said, "I love to feel the machinery *give* under my hand." No play can equal the delight that comes from feeling our powers in useful and efficient activity.

If the parents do not themselves see that the girl should be trained to care properly for the home, they are soon to feel a wholly new pressure—that of the state. Ten years ago what our daughters learned or did not learn was considered a wholly private matter, but we are

given to understand on all sides now that the community has something at stake in the character and efficiency of the young people that we send out.

Dean Arnold of Simmons College in her address as President of the National Home Economics Association at its meeting in Cornell University last summer dwelt on this point. She said, "We must think of education as a preparation for life. . . . it must make it possible for the youth to fulfill their responsibility in the home. We shall yet say to the girl, 'You cannot leave school until you have received the elements of the training that enables you to undertake homemaking and homekeeping, to secure the essentials of the American home. . . . We shall not be satisfied if your children are sewed into their clothes to stay there from November till June; we shall not be satisfied if your back door spreads disease through the neighborhood; we shall not be satisfied if your children die in infancy because you have not learned how to feed and house them.'" And she might have added unless women reach a satisfaction in their work and their development and help the men connected with them to do the same.

DISTRIBUTION OF HOUSEHOLD LABOR¹

C. F. LANGWORTHY

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Every one recognizes that agriculture and Home Economics are closely related, the one producing and the other utilizing the raw materials of food, clothing, and shelter. How great a part these two play in the life of the race is realized when we consider primitive or frontier conditions, where the two pursuits make up the sum of the activities of the family. The home is undoubtedly the older of the two, since the family gathered and prepared its food for untold years before it cultivated it. However, it seems certain that agriculture was first recognized as an art and systematized. It was also first taken to the laboratory for study and reduced to pedagogical form. It comes about, therefore, that in many cases as the subject of Home Economics has developed, it has been able to profit by the experience already gained in agriculture. This is too well recognized to need discussion but it seems worth while to mention that the attempt to prepare a syllabus of Home Economics was a direct result of the similar enter-

¹ Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

prise which had been successfully carried on for agriculture by the Association of Agricultural Colleges and Experiment Stations. These things being so, it is natural that we should scan closely the advance which is being made in the study of agricultural problems to see whether it may not suggest a parallel advance which may be made in Home Economics.

A very promising problem for study is suggested by the report on the distribution of farm labor made by Prof. O. R. Johnson of the University of Missouri, and published as one of the research bulletins of the Missouri Agricultural Experiment Station.² The author of this bulletin has recognized that the labor phase of farming may be separated broadly into two parts—the labor equipment (including men and horses kept for the purpose of doing farm work), and the labor requirement (including the physical labor necessary to carry on the farm operations). As he states: "These two factors are usually intended to be equal in quantity. In other words, a farmer never intends to have more labor available than required, or vice versa. A study of labor distribution is a study of the adjustment of these factors." As he is careful to point out, this matter does not involve in any sense the problem of securing efficient labor, which matter is commonly spoken of as "the labor problem." "The adjustment of labor equipment to labor requirement of any farming system," Professor Johnson continues, "is more or less affected by special conditions. The simplest adjustment is found where the manager of the business finds it possible to employ all the labor equipment—both man and horse—for as short or as long a time as is necessary. From this simple process, the adjustment problem goes to the other extreme, where a manager must employ his help for the entire year in order to obtain help which is efficient and dependable. For the latter case the task of adjusting the two factors is most difficult. With the increasing difficulty of obtaining labor equipment, goes the increasing difficulty of adjusting the two factors under any conditions. Through long experience in farm enterprises, nearly all managers have learned the most satisfactory results under existing conditions. If conditions have caused them to adopt a system of farming which gives a fairly regular amount of labor through the year, this also lessens the difficulty of adjusting the two factors."

The investigation referred to was undertaken to secure facts of interest in discussing such topics as these, and the report presents

² *Missouri Sta. Research Bul. 6.*

satisfactory data regarding the number of man-hours and horse-hours, that is, the hours of labor—by a man and by a horse—required per acre for the cultivation of eight or nine common crops, assuming that the crops receive attention whenever they require it. The study of the labor requirements of different crops per month serves as a basis for fitting crops together from a standpoint of labor distribution. Such data make it possible to study the degree to which the crops conflict from the standpoint of labor, and show how much extra labor will be needed and about when it will be needed, which means that crop rotation can be planned, with a minimum of conflicting operations, to anticipate the labor requirements for the different months of the year. As a whole, farm labor was subdivided into production and maintenance or upkeep—production being subdivided into crop and other factors, and maintenance or upkeep into equipment, real estate, household, work stock, and personal, these entries being further subdivided.

Every one knows that crop cultivation requires more man-hours and horse-hours in summer than it does in winter, and the bulletin referred to shows what the mathematical relation is and the bearing of the whole matter upon the distribution of farm labor, such as upkeep and repair of buildings. It is obvious that such mathematical studies of farm labor must be beneficial, just as truly as an accurate system of accounts is better than a general idea of income and expenditures. It seems clear that a similar study of household labor would prove equally interesting and valuable.

In connection with the Department of Agriculture Nutrition Investigations consideration has been given to energy requirements for muscular work of different intensity and to energy production as related to food supply. General data have been gathered regarding various matters relating to these questions and a method has been worked out involving the use of the respiration calorimeter for studying the energy requirement and energy expenditure of men and women performing different kinds of work under varied conditions. The study of farm labor was, therefore, of double interest in connection with the Department work, and so data in hand regarding the various items making up household labor were brought together and the attempt made to distribute them according to the scheme which Professor Johnson proposed for farm labor. The three principal subdivisions—production, upkeep, and operation—were retained, and these were further subdivided, as shown in the diagram which follows.

Distribution of household labor

Distribution of household labor	Production	Food	<ul style="list-style-type: none"> Cooking, preserving, and storing Kitchen gardening Dairying Poultry raising Beekkeeping Milling, etc.
			<ul style="list-style-type: none"> Spinning Weaving Making hangings, household linen, etc. Cabinet making, wood finishing Painting, papering Carpet and rug making Upholstering Embroidering, metal working, and other art handicraft Ornamental gardening Soap making, candle making, etc.
		Clothing	<ul style="list-style-type: none"> Spinning Weaving Garment making Knitting (stockings, etc.) Millinery Shoemaking, etc.
	Upkeep	<ul style="list-style-type: none"> Stocking provisions and other supplies Renewing, renovating, repairing Laundering Dish washing House cleaning (daily, weekly, and occasional) Heating, lighting, ventilating Disposal of waste Care of lawn, sidewalk, etc. 	
	Operation	<ul style="list-style-type: none"> Ordering and marketing Bookkeeping and accounting Planning meals Serving food Care of children, aged, and infirm Training children Hospitality and other social activities, etc. 	

A consideration of the data as classified suggests many things for discussion. One of the most obvious is that so many of the items described under "production" have passed entirely or are passing out of the home. For example, all that remains of milling in American homes, except among the Mexican families of the Southwest who still grind corn for tortillas, is the grinding of the breakfast coffee, or, occasionally, of a little wheat or other grain for some special kind of homemade bread or for breakfast cereal. Spinning and weaving and candle making have almost gone, as have soap making and shoe-making. The factory has almost entirely superseded the kitchen as a workshop for these activities. Rug making, carpet weaving, and basket making survive in some remote rural regions, and attempts are made to foster such home industries as a means of adding to the family income, but, disregarding these exceptions, such household arts are practiced only for teaching purposes or as a pastime. Dairying and laundering, too, are passing from the home, as is a great deal of the heavy baking; and each decade sees a greater percentage of canning and other methods of preserving foodstuffs left to the factory. Sewing and garment making (for family use, not for commercial purposes) remain home industries to a much greater extent, but here, too, a change can be noted. Men's garments, except underwear and linen, are almost never made at home for the men of the family, and women's and children's garments are purchased outside the home in a constantly increasing proportion.

Will the time come when there will be left in the home only a certain immovable minimum? If so, what will be its content? Will the lighter tasks of cleaning and caring for the home, of preparing food, and of serving it remain, together with the laundering of light articles, especially fine and delicate fabrics, and a certain amount of garment making and repairing, which require special skill? Will the upbringing of children go out of the home as their formal education has so largely gone? If so, what will be the effect upon the child and upon the family life? We know that in many families of wealth the responsibility of training children is now often turned over to governesses and tutors. But, despite the success of some conspicuous examples of this method which might be noted, most of us would be loath to believe that there is any general substitute for the home, for discipline and for the development of the finer instincts and sensibilities. What is to occupy the housewife's attention when the last task has left the home, if such a time ever comes? These do

not seem idle speculations when we recall that not only industries have gone but that we entrust the care of our sick to the trained nurse, and very often in the hospital, instead of in the home, because we realize that the chances of recovery are thereby increased.

If we consider how we may contribute to the solution of home labor problems as well as speculate about them, many suggestions occur. First of all, a more systematic and careful survey of the field should be made that we may know just how much information we have on hand and its character, and that we may the better understand the relation of home problems to other activities.

Specific questions for study by laboratory methods are numerous. For instance, in order to carry out the study of household labor logically and adequately, a large number of time studies should be made to ascertain how much time the housewife spends in the average home on her different household tasks, as well as their daily and seasonal variation, and the possibilities of more logical adjustment. Experimental studies should also be made with a view to devising better methods where such are needed. Does it, in fact, take three-quarters of an hour to sweep and dust one room fourteen by fifteen feet, to quote the figures of a recent writer³ on "Household Tasks and the Servant Question"? What is the relation of the finish and furnishings to the time required? Can we, by the study of our household mechanics, reduce the hours of labor and increase the hours available for rest and recreation, without lowering household standards?

To mention others of the many lines of research which suggest themselves when we consider the factors of labor: How many hours of work does it take to prepare three simple meals per day for a family of average size? Can the amount of time be reduced and how? What is the relation of the character of the meals to the time and labor involved? Is it possible to lessen the "woman-hours of labor" in a given home by purchasing more foods ready-made, and what is the effect of this upon the family comfort as well as the family income?

Together with the collection of such data by laboratory methods should go studies of the actual energy expended in carrying on the different household tasks by different methods, and the relation of body position and household equipment to such labor expenditure. Perhaps some other means may be forthcoming for making such

³ *Atlantic Mo.*, III, 1913, no. 4, pp. 496-506.

studies, but at present the most promising, if not the only method for studying them quantitatively, involves the use of the respiration calorimeter. With this instrument it is possible to measure the energy expended for any kind of household labor, which can be reproduced in the calorimeter chamber, and the effect of a great variety of conditions upon the production of physical labor and the comparison of energy expenditure with energy supplied by food. When these things have been done, we will be in a better position to discuss more intelligently than is otherwise possible such matters as efficiency and the economy of labor and to make comparisons, and we will have data for speaking about man-power and woman-power with as much accuracy as we now can about horsepower. Will not numerical data make for clear thinking in discussing home tasks, as they have for discussing so many problems of the mechanics of manufacturing industries? If we had such data on hand, could we not discuss the question of a proper day's work in the home and the matter of overwork? Could we not determine the limits of safety in household work, and would we not be in a better position than we are at present to discuss the relation of physical labor to physical and mental breakdown?

If we can fix upon values for some of the different types of household labor by taking into account the average sum per hour which must be paid to women outside the home for commercial baking, laundering, caring for children, nursing, teaching, etc.; if we know the amount of time spent on such labor in the home and also the physical energy involved, to help us in our comparisons, we should be able to estimate more accurately than now the money value of the contribution made to the family budget by the housekeeper's labors. Its value would sometimes be startling and would always be interesting.

It is much easier to speculate than to accomplish, but is it not possible for this association to consider the matter through a committee or otherwise? A beginning might be made by working on an outline for the distribution of household labor, to see how the one here suggested should be modified and improved, and we might also undertake systematic time studies of different household tasks under varied conditions. As a contribution to the subject, we hope that we may in the Department of Agriculture laboratories use our respiration calorimeter to measure the actual energy expended in the performance of household tasks of different sorts and under different conditions.

JAMES NASMYTH AND HIS ECONOMICAL DEVICE FOR SLOW COOKING¹

An article in a recent number of *Chambers Journal* attributes the invention of casserole cooking to James Nasmyth, the well-known Scotch inventor. This is hardly accurate, since the casserole was known long before the beginning of the nineteenth century, the time when Nasmyth was born. He did, however, originate a cooking device very similar in principle to the Aladdin oven. The cooking pan was insulated from the outer covering by an air space and was heated by a small lamp. Some data about this and about marketing and housekeeping in old Edinburgh in 1816, or thereabouts, are quoted from Nasmyth's autobiography, which was edited by his friend Samuel Smiles of *Self Help* and *Character* fame, and first published some thirty or more years ago. As his book shows, Nasmyth must have always had an interest in the daily affairs of the home. His memories of such things in his early childhood are full of charm as will be seen by the following extracts.

"One of my greatest enjoyments when a child was in going out with the servants to the Calton and waiting while the 'claes' bleached in the sun on the grassy slopes of the hill. The air was bright and fresh and pure. The lasses regarded these occasions as a sort of holiday. One or two of the children usually accompanied them. They sat together, and the servants told us their auldwarld stories; common enough in those days, but which have now, in a measure, been forgotten. 'Steam' and 'progress' have made the world much less youthful and joyous than it was then.

"The women brought their work and their needles with them, and when they had told their stories the children ran about the hill, making bunches of the wild flowers. They ran after the butterflies and the bumblebees, and made acquaintance in a small way with the beauties of nature. Then the servants opened their baskets of provisions, and we had a delightful picnic. . . .

"In the days I refer to there was always a most cheerful and intimate intercourse kept up between the children and the servants. They were members of the same family, and were treated as such. The servants were for the most part country-bred daughters of farm servants or small farmers. They were fairly educated at their parish schools;

¹"James Nasmyth: An Autobiography." Edited by S. Smiles. New York, 1884, n. ed., pp. 74, 75, 78, 79, 80, 145, 146, fig. 1.

they could read and write, and had an abundant store of old recollections. Many a pleasant crack we had with them as to their native places, their families, and all that was connected with them. They became lastingly attached to their masters and mistresses, as well as to the children. All this led to true attachment; and when they left us, for the most part to be married, we continued to keep up a correspondence with them which lasted for many years."

Another source of enjoyment in his early days, was to accompany his mother to the market. "My mother," he writes, "though generous in her hospitality, was necessarily thrifty and economical in the management of her household. There were no less than fourteen persons in the house to be fed, and this required a good deal of marketing. At the time I refer to [about 1816] it was the practice of every lady who took pride in managing economically the home department of her husband's affairs to go to market in person. The principal markets in Edinburgh were then situated in the valley between the Old and New Towns, in what used to be called the Nor' Loch.

"Dealers in fish and vegetables had their stalls there. The market for butcher meat was near at hand, and all were in their several locations. It was a very lively and bustling sight to see the marketing going on. When a lady was observed approaching, likely to be a customer, she was at once surrounded by the 'caddies.' They were a set of sturdy, hard-working women, each with a creel on her back. Their competition for the employer sometimes took a rather energetic form. The rival candidates pointed to her with violent exclamations: 'She's my ledie! she's my ledie!' ejaculated one and all. To dispel the disorder a selection of one of the caddies would be made, and then all was quiet again until another customer appeared.

"There was a regular order in which the purchases were deposited in the creel. First, there came the fish which were carefully deposited in the lowest part with a clean deal board over them. The fish-wives were a most sturdy and independent class, both in manners and language. When at home, at Newhaven, or Fisherrow, they made and mended their husbands' nets, put their fishing tackle to rights, and when the fishing boats came in they took the fish to market at Edinburgh. To see the groups of these hard-working women, trudging along with their heavy creels on their backs, clothed in their remarkable costume, with their striped petticoats, kilted up and showing their sturdy legs, was indeed a remarkable sight. They were cheerful and good humored, but very outspoken. Their skins were clear and ruddy,

and many of the young fish-wives were handsome and pretty. They were, in fact, the incarnation of health.

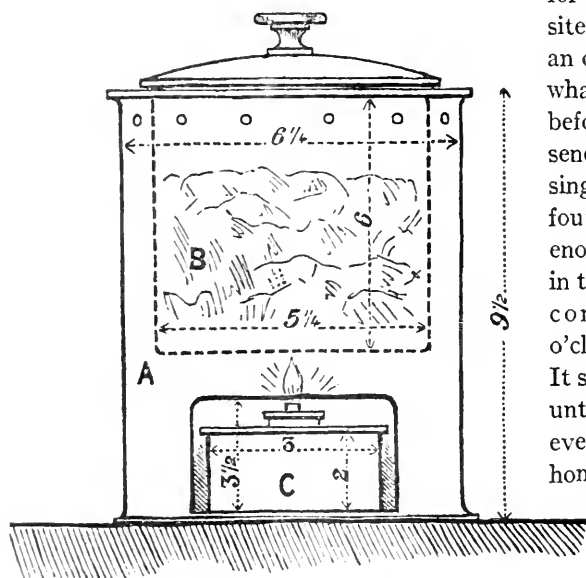
"In dealing with them at the fish market there was a good deal of higgling. They often asked two or three times more than the fish were worth—at least, according to the then market price. After a stormy night, during which the husbands and sons had toiled to catch the fish, on the usual question being asked, 'Weel, Janet, hoo's haddies the day?' 'Haddies, mem? Ou, haddies is men's lives the day!' which was often true, as haddocks were often caught at the risk of their husbands' lives. After the usual amount of higgling, the haddies were brought down to their proper market price—sometimes a penny for a good haddock, or, when herrings were rife, a dozen herrings for twopence, crabs for a penny, and lobsters for threepence. For there were no railways then to convey the fish to England, and thus equalize the price for all classes of the community. . . .

"When my mother had got her fish laid at the bottom of the creel she next went to the flesher for her butcher meat. There was no higgling here, for the meat was sold at the ordinary market price. Then came the poultry stratum; then the vegetables, or fruits in their season; and, finally, there was 'the floore'—a bunch of flowers—not a costly bouquet, but a large assortment of wallflowers, daffodils (with their early spring fragrance), polyanthus, lilacs, gillyflowers, and the glorious, old-fashioned cabbage rose, as well as the even more gloriously fragrant moss rose. The caddy's creel was then topped up, and the marketing was completed. The lady was then followed home, the contents were placed in the larder, and the flowers distributed all over the house."

And now we come to his cooking device which must have been invented about 1829 when he went up to London from Edinburgh to enter Henry Maudsley's works in London as an assistant, the Maudsley shops being the most famous machine manufactory in England at the time. "I was resolved," he writes, "that my wages alone should maintain me in food and lodging. I therefore directed my attention to economical living. I found that a moderate dinner at an eating house would cost more than I could afford to spend. In order to keep within my weekly income I bought the raw materials and cooked them in my own way and to my own taste. I set to and made a drawing of a very simple, compact, and handy cooking apparatus. I took the drawing to a tinsmith near at hand, and in two days I had it in full operation. The apparatus cost ten shillings, including the lamp. As it con-

tributed in no small degree to enable me to carry out my resolution, and as it may serve as a lesson to others who have an earnest desire to live economically, I think it may be useful to give a drawing and a description of my cooking stove.

"The cooking or meat pan rested on the upper rim of the external cylindrical case, and was easily removable, in order to be placed handy



Nasmyth's cooking apparatus.

A, cylindrical outer case; B, the meat-pan, movable; C, oil-lamp.

for service. The requisite heat was supplied by an oil lamp [presumably whale oil, as this was long before the day of kerosene] with three small single wicks, although I found that one wick was enough. I put the meat in the pot, with the other comestibles, at nine o'clock in the morning. It simmered away all day until half-past six in the evening, when I came home with a healthy appetite to enjoy my dinner. I well remember the first day that I set the apparatus to work. I run to my lodging, at about 4 p.m.,

to see how it was going on. When I lifted the cover it was simmering beautifully, and such a savory gusto came forth that I was almost tempted to fall to and discuss the contents. But the time had not yet come, and I run back to my work.

"The meat I generally cooked in it was leg of beef, with sliced potato, bits of onion chopped down, and a modicum of white pepper and salt, with just enough of water to cover 'the elements.' When stewed slowly the meat became very tender, and the whole yielded a capital dish such as a very Soyer might envy. It was partaken of with a zest that, no doubt, was a very important element in its savoriness. The whole cost of this capital dinner was about $4\frac{1}{2}$ d. I sometimes varied

the meat with rice boiled with a few rasins and a pennyworth of milk. My breakfast and tea, with bread, cost me about fourpence each. My lodgings cost 3s. 6d. a week. A little multiplication will satisfy any one how it was that I contrived to live economically and comfortably on my ten shillings a week. In the following year my wages were raised to fifteen shillings a week, and then I begun to take butter to my bread."

In the autobiography, Nasmyth adds a note about his early invention as follows: "I have this handy apparatus by me still [1884]; and, to prove its possession of its full, original efficiency, I recently set it in action after its rest of fifty years, and found that it yielded results quite equal to my grateful remembrance of its past services."

A COMPARISON OF METHODS OF COOKING¹

CORNELIA FRENCH

The fireless cooker is a very practical and scientific adaptation of the recoloration of retained heat through good insulation. In the cooking of foods in water it is impossible, under ordinary atmospheric pressure, to raise the temperature above 212° F. no matter how much fuel is consumed under the vessel, for the reason that at 212° water becomes steam. In its simplest form the fireless cooker is a well-made box, usually of wood, packed well with insulating material (*i.e.* non-conducting) in which there are wells that hold cooking utensils. Into these wells the utensils holding the boiling food may be placed and the food will continue to cook. Since the first attempt to make use of this principle the cooker has been improved until now it is a contrivance which roasts, bakes, boils and freezes—in fact it is a living example of the new science—Efficiency.

The common types of the modern fireless cooker have cases of wood, treated to stand excessive heat—this being very practical, as wood is a natural non-conductor of heat; the insulating material is of mineral wool; over the insulating material is the lining of seamless aluminum. There are usually one, two or three wells into which the cooking vessels fit, also the radiators made of soapstone which are used for baking and roasting. Some models have a ventilating valve in the top of the cover which allows the excess of steam to escape. There is also a combination of fireless cooker and gas range which may be used as either

¹ Extracts from thesis, 1913. Senior Normal Work, School of Household Science and Arts, Pratt Institute.

or both. It is built throughout of steel lined with monel metal. The main body outside is constructed of steel plate; between the lining of monel metal and the steel plate is a lining of asbestos while on either side of this the space is filled with mineral wool, a very good non-conductor of heat. The hood which covers one or more of the top burners and hangs from a balanced crane is lined with the same material.

The manufacturers of the fireless cookers claim that by using them the cost of fuel can be reduced from five-eighths to nine-tenths; that pots are not difficult to wash; that food is better cooked; that time and labor are saved; and that hot kitchens are eliminated.

To prove the truth or fallacy of these claims and to judge these appliances, in comparison with the gas range, as to economy of time and labor, and as to the palatability of products, the same articles of food were cooked in the gas range, the fireless cooker and the combination gas range and fireless cooker with the following results:

Breakfast				
Stewed prunes				Cream of wheat
Bacon		Coffee		Hot biscuit
Cooked with gas range				
ARTICLE	TIME	GAS USED	LABOR	RESULT
		<i>cu. ft.</i>		
Prunes.....	1 hr.	24	All required watching	Products excellent in appearance and palatability.
Cereal.....	1 $\frac{1}{4}$ hr.	30		
Bacon.....	15 min.	6		
Coffee.....	18 min.	7		
Biscuit.....	25 min.	20		

Total: 87 cubic feet gas used in preparing meal. Cost of fuel at the rate of \$.80 per 1000 cubic feet = \$.0696.

Cooked with fireless cooker					
ARTICLE	TIME OVER FLAME	TIME IN FIRELESS	GAS USED	LABOR	RESULT
			<i>cu. ft.</i>		
Prunes.....	10 min.	2 hrs.	4	Less than cooking meal by gas.	Better in taste and appearance than same cooked by gas. Very well baked.
Cereal.....	10 min.	4 hrs.	4		
Bacon (by gas)...	15 min.		6		
Coffee.....	18 min.		7		
Biscuit.....	radiators 10 min.	35 min.	16		

Total: 37 cubic feet used in preparing meal (24 cubic feet used in preparation for fireless cooker; 13 cubic feet used for coffee and bacon). Cost of fuel = \$0.0296. $\$0.0696 - \$0.0296 = \$0.04$ saved by using fireless cooker. $87 \text{ cubic feet} - 37 \text{ cubic feet} = 40 \text{ cubic feet}$ of gas saved. 40 is about four-ninths of 87; therefore amount of gas saved was about five-ninths.

Cooked with combination gas range and fireless cooker

ARTICLE	TIME OVER FLAME	TIME IN FIRELESS	GAS USED	LABOR	RESULT
			<i>cu. ft.</i>		
Prunes.....	10 min.	2 hrs.	3	Required no attention after gas was turned off.	Equal to product from fireless cooker.
Cereal.....	10 min.	4 hrs.	3		
Bacon.....	15 min.		4.5		
Coffee.....	18 min.		4.8		
Biscuit	10 min. 2 burners	35 min.	8.		Equal to product from fireless cooker.

Total: 23.3 cubic feet used. Cost of fuel = \$0.01864. $\$0.0696 - \$0.01864 = \$0.05096$ saved on cooking by gas, $\$0.0296 - \$0.01864 = \$0.01096$ saved on using fireless. $87 \text{ cubic feet} - 23.3 = 63.7 \text{ cubic feet}$ gas less than range. $37 \text{ cubic feet} - 23.3 = 13.7 \text{ cubic feet}$ gas less than fireless. 23.3 is $23.3/87$ or about one-fourth of 87, therefore about three-fourths of the fuel was saved by using the combination instead of a gas range.

A second test was made in which a luncheon consisting of beef loaf, potatoes, muffins, and apples was prepared in the three ways with the same degree of accuracy. The final results are summarized as follows:

Saving over gas range cooking

COMPARISON BY MEALS	FIRELESS COOKER	COMBINATION COOKER
Amount saved on two meals	\$0.1296	\$0.1589
Average per meal0648	.0795
Amount saved for three meals (one day)1944	.2385

Judging by these results it would take 93 days for an \$18 fireless cooker to pay for itself, and 231 days for a \$55 combination cooker to pay for itself.

Cereals have been called the most abused food for the reason that they are seldom cooked long enough. Used primarily as breakfast food they receive one-half to two-thirds hour's cooking. The fireless cooker and combination cooker are particularly adapted to the cooking of cereals for they may, in this way, receive four or five hours' cooking with less expenditure of gas, labor and care than are required for one-half hour's cooking over the flame. Oatmeal and rice were cooked in the three ways with the following results: Cost of fuel: gas range, \$0.04; fireless cooker, \$0.0076; combination cooker, \$0.008.

Products from the fireless cooker and combination cooker were equal in palatability, and, in the writer's opinion, both were better than the product from the gas stove. Labor and expense were least when the combination cooker was used. Bread was also baked in the three ways with a similar saving of gas. There was no apparent difference in the loaves of bread baked in the three ways. They were of the same texture, were moist and very palatable.

Judging by this experimental work the claims of the fireless cooker manufacturers would seem in general to be true. The cost of fuel was reduced five-eighths or more. Pots were not as difficult to wash, as food did not stick. In every case, except boiling potatoes, the food was as well cooked as when done by gas. In the case of cereals and prunes the product from the cooker was more desirable than that cooked by gas. Time and labor were saved (when radiators have to be heated and transferred to the cooker, the labor is about the same) and heat in the room was greatly reduced.

A homemade fireless cooker which is both useful and practical may be made by anyone, with very little expense. A successful one was made by taking a well-made box 15 inches square and 9 inches high, and having a cover which slid into a groove. The bottom was then packed 2 inches deep with newspaper, crumpled up and made firm by pressing with weights, on top of that, in the middle of the box, was placed a regular aluminum fireless cooker utensil and around it was made a cylinder of cardboard. The utensil was then removed, leaving a well of cardboard. A piece of cardboard was placed at the base of the well to form a bottom, then more newspaper was packed securely around the well, pressed down with weights and left for several days; then paper was again packed in until the box could hold no more. On top of the paper and around the well was placed another piece of cardboard, which really formed a box around the well and the paper. The utensil then slipped easily into the well and was partially insu-

lated on three sides by from 2 to 3 inches of well packed newspaper. To cover the top, a cushion was made of lawn and into it was stuffed fold after fold of cheese cloth. When the cushion and the wooden cover were on, the insulation was excellent. Cereals (hominy and oatmeal) were cooked by gas, each for ten minutes, then transferred to the cooker and left about four hours. They were then well cooked—in fact, equally as well as in the commercial fireless cooker. In each case 5.5 cubic feet of gas was burned, the cost for 5.5 cubic feet being \$0.0044. If the homemade cooker were used only for cooking cereals and boiled meats it would still be worth while, as the cost and labor of building a cooker are comparatively small.

Cost of the homemade fireless cooker

Box.	given by any grocer
Cardboard.	\$0.05
Utensil (aluminum).....	1.00
Cheese cloth.....	0.15
Lawn.....	0.08
	<u>\$1.28</u>

This cost might easily be reduced one-half by using an enameled or granite-ware utensil, instead of one made of aluminum.

A STUDY OF TEXTILES AS A PART OF THE RELATED SUBJECT MATTER IN COURSES OF SEWING

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The subject of textiles in the elementary school has been so completely adjusted in relation to the handwork and sewing courses that it now covers the study of both clothing and household fabrics from the view point of history, geography, design, and, in the higher grades, hygiene also. Handwork is the medium in the lower grades, calling into action the larger muscles; while sewing is the medium after the finer muscular development and control are completed. One may be thought of as paving the way for the other, and the intellectual development that accompanies the one is simply continued by the other. The children in the lower grades, while making simple, often primitive articles, are given a logical sense of the textile arts as race activities, and live again, to some extent, through the evolution of these activi-

ties, which has brought the race to its present culture. Parallel with this historic side, something of the geography of the country is learned in the study of the sources of the various materials handled. An appreciation of form and color, as well as the relation of design to materials, tools, and methods of work are sought for in the teaching of advanced elementary work.

Since all of these aspects can not be dealt with in a short time, this limited paper will be confined to a side of the textile arts that is perhaps least considered, and one that is related more especially to sewing, namely, the economic side of textiles. As one of the modern educators has said, "Education for the people must include all of what life calls for as well as the pure intellectual process aimed at, the complete moral, physical and intellectual development." At present, a girl who has received a fairly thorough training in sewing, often knows little about efficient buying. This necessary knowledge when gained through experience means loss of time and money during the learning, while the textile course can furnish it easily and directly. And a girl who is prepared to consider intelligently the economic side of textiles, as well as their history and design, is better prepared to meet the problems of her individual life.

This question of what to buy and how to buy it, falls into the textile subject matter related to sewing taught in the upper grades, or in the high school, where the aim is the making of clothing. The underwear class offers, perhaps, the first opportunity for its presentation. Here the various staple materials that can be used in the construction of muslin underwear should be considered, and the characteristics of each discussed. This discussion if it is to be of any lasting benefit must be illustrated with full width samples of the materials, so that the children can handle them and learn to associate the name, appearance, and feel of each. Many of the class will no doubt have heard the terms nainsook, cambric, and long cloth at home, but most of them will realize for the first time the softness of one, the glazed surface of another.

A comparison of the costs of the different materials is, of course, important. Each student can see for herself, if the prices are marked on the samples, that nainsook costs more per yard than the same grade of cambric, but with no past experience for a guide, she cannot possibly look ahead far enough to see that the difference in costs is even greater than the numerical indication. Therefore, some idea of the wearing qualities of each fabric should be given and then the final cost of each estimated.

A talk of this same kind related to the textiles used in the making of outer garments will have to include color, dealt with from the economic side, namely the comparative permanence of various dyes and colors both in regard to fading and also to "running" when laundered. Certain colors are in a class known as "light fugitives." The student should know which these are so that she may discriminate when buying. Experimental tests can supplement this work. The difference in wear between printed and yarn-dyed fabrics is practical information worth knowing, and in giving this, some methods of textile manufacture will incidentally be introduced. Simple tests for detecting adulteration in fabrics should be demonstrated. This will also be the means of introducing a little chemistry or of applying, if in a high school, what is given in the regular chemistry course.

If discussions of this kind could precede the making of each garment, and the advice that Comenius gave, "Let the things that have to be done be learned by doing them," were then applied by the student in the purchase of material for this garment, the subject of textiles in relation to the sewing course would be far more vital.

There is still another side to the economics of textiles in relation to sewing. This is the wardrobe as a whole. The school girl has very little idea of what kind of clothing is suitable and practical, or does she know how to plan an efficient wardrobe that will still contain the minimum number of garments. Girls that are old enough to be given talks on this subject are just about at that age when they emulate some leader among them. They imitate not only her clothes, but even her walk, and her way of talking does not escape them. If this leader comes from a home where her clothes are sensibly planned, very good; this imitation then does no harm; but if she is a leader who wears large frillings, lace jabots, beribboned underwear, and silk petticoats, the effect on the others is disastrous. No amount of reasoning or explaining in their own homes will convince these girls that such clothing is not only poor economy but poor taste as well. Right here lectures from the textile instructor on the harmonious relation that should exist between fabrics and their place in a wardrobe, might work wonders. As Ida Tarbell has so aptly put it in her recent volume "The Business of Being a Woman," "The folly of woman's dress lies not in her instinct to make herself beautiful, it lies in her ignorance of the principles of beauty, of the intimate and essential connection between utility and beauty. It lies in the pitiful assumption that she can be the thing she envies if she looks like that thing."

Then too large a number of each kind of garment is an economic drain and needs attention. This will apply generally to underwear, and will be directed mainly at unnecessary buying, and at buying new garments before the old are completely worn out, which means eventually a quantity of half-worn articles, too good to throw away and yet rather shabby after all.

Many of these remarks may seem rather remote from the thought of textiles as it is at present held; but the need of education along the lines suggested by them will not be doubted, if the clothes of the average school girl are analyzed, especially those of the high school girl. Of course, some of the ideas might be assembled into special lectures, but the textile instructor has the opportunity of covering the ground from the viewpoint of economy, utility, and beauty, and can do it in an intimate yet impersonal way.

This is a plea for the extension of the study of textiles until it includes the economic side as well as the historic and design sides in its relation to sewing.

REPORT ON HOUSING CONDITIONS AND DIET OF HIGH SCHOOL PUPILS AT VEVAY, INDIANA

Under the auspices of the Indiana State Board of Health, a survey of the living conditions of pupils who "room" in town during the school term was made in April, 1913, by Dr. Ada E. Schweitzer, Assistant Bacteriologist of the Board.

It is a common custom for pupils from the country to "room" and "board themselves" when they attend the high school in some town near their home. The report which is given below essentially as it appeared in a publication of the Indiana State Board of Health¹ is therefore of general interest and the more valuable since studies of such matters are much needed, the whole question being one deserving of serious consideration.

It seems to be the belief of parents either that supervision is a part of the landlady's duty or that the young people are able to "take care of themselves." Whatever may have been the case in former times, the justifiable importance now generally attached to social considerations makes one realize that for these young people who are leaving home for the first time some better plan is needed for safe-

¹ *Mo. Bul. Indiana State Bd. Health*, 16, 1913, no. 6, p. 217.

guarding them in their social relations, as well as in their health, comfort, housing, and diet. There is a growing appreciation in colleges and universities of the importance of housing and feeding problems. It is realized that dormitories, college commons, boarding houses, and eating clubs cannot be expected to run themselves without adequate standards and without general supervision. The matter is equally important in boarding schools and village and town schools attended by pupils who do not live at home. School lunch work, valuable as it is, is only a step in the right direction. Much more extended work is needed before we can understand existing conditions and formulate standards and practice which will lead to the much needed better things. According to Dr. Schweitzer:

Vevay, Switzerland County, Indiana, is an "old" town on the Ohio River, with old houses, old families, etc. The town has electric lights and water supply which are connected mostly with the better homes, but no municipal sewerage system exists. Private sewers are regulated by ordinance. Garbage disposal is not uniform nor as a rule sanitary. The population is 1256.

The school buildings are substantial but inadequate. They will be improved and new buildings erected during the summer. Officials, school board and teachers are progressive and efficient. The school has a strong chorus, orchestra, athletic associations, and other organizations. The Parent-Teacher's Club of the town is well organized and devoted to the best interests of the young people.

Four rooming houses were examined. One had no foundation, was shabby and badly warped, and the second story was low. One house had electric lights. House no. 1 represents the average. The foundation wall is low, the basement dry, the house a large square frame building, fronting even with the street. The rooms are high and well lighted, the second floor reached by broad front stairs and by narrow, steep back stairs. The latter are used by roomers. Four rooms on the second floor are rented to students, a front room and a back room to each group. The front rooms are large, high and well lighted, having two large windows facing the street. The back rooms are smaller, have sloping roof, and are well lighted. The night light is that of a large coal oil lamp and is a good light. Two south rooms are occupied by four girls. The front room is divided by curtains, the light part being used for a living and study room, the curtained recess for a bed-room. Two beds placed side by side for four girls are too close for health, even with the curtains drawn back at night and the windows wide open. A two-plate laundry stove is used for heating, sometimes for cooking. Cooking is usually done on a gasoline stove. There is sufficient plain furniture and the rooms are neatly kept. There are no decorations. Lace curtains filter the dust from the street air. There is no bath room, but an out-door privy. This group of girls have a regular program for sleep, study, meals, and recreation. They bring provisions from home and cook regularly, but the meals are not always well balanced as to food value. Perishable foods are kept in the landlady's refrigerator. Garbage is thrown on the ash heap. The general health of the girls appears to be good. They are known as "quiet home bodies." The girls are allowed to entertain young men in the

parlor downstairs. The north rooms are similar to the south, with better furnishings, but not so well kept. The windows are never open, and the air is heavy and odorous. The tenant is a girl who sleeps late, cooks irregularly, often going without breakfast. She eats cheese, crackers, cakes, etc., rather than prepare meals and has chronic indigestion. She is very irregular in school attendance, and "slips through" grades. Her habits are said to be due to laxness in management at home. She needs sympathetic supervision and firm discipline. These two groups show the extremes. Several instances were found where little cooking was done. One energetic girl cooked for three brothers, but did not understand food values. Garbage was usually thrown on the ash heap or out to chickens. In a few cases it was burned. Some rooms were well kept, others "cleaned up by spells." As a rule the girls entertained their young men friends in the family parlor. However, a few of the irresponsible sort were inclined to take advantage of the lack of direct supervision and to disregard convention if not discretion. Elder girls refused to "tell" on younger sisters and landladies did not wish to assume the task of exercising a discipline which in many cases had been unsuccessful in the home. Some lacked tact and others had no difficulty in enforcing such rules as they chose to make. The parents seemed to feel that, when they came to town in the fall, and from the rooms available selected the ones best adapted to the needs of their children, and then furnished them at frequent intervals with the best fresh food the country afforded, they were doing all that could be expected of them.

A meeting of all persons interested was called by the Parent-Teachers' Club to disseminate information and to discuss plans for the improvement of these conditions. There were present, parents, teachers, preachers, landladies, members of the school board, and high school pupils. Discussion was given from the viewpoint of each. For the improvement of the situation two plans were presented, one being the establishment of a dormitory with a matron in charge in a large dwelling house nearby. The young folk were to rent and furnish their rooms and to pay for the cost of service. Each was to be credited at market price with whatever food was brought from home. A few might assist with the work. Study rooms and recreation rooms were to be provided. The success of this plan seemed to hinge on the choice of a matron.

A second plan was the establishment of a cottage system in connection with the Vocational and Domestic Science work at the school. Each cottage was to house six and to be in charge of a matron and a department teacher at the school. Each group was to work out successively and in a practical way a series of problems to be proposed in the regular course of study. This plan was favorably received, the only handicap being a lack of funds. So far as had been ascertained no other high school in the state has even considered in a practical way the housing conditions of high school pupils. The talk by your representative was requested for the purpose of arousing general interest in the subject and of creating public sentiment favorable to some plan in the interest of the entire community. Discussion and comment indicated that the desired purpose was accomplished.

Investigations similar to those in Indiana are being made in Wisconsin, as reported by the *Wisconsin Journal of Education*:²

²*Wisconsin Jour. Ed.* 46, 1914, no. 1, p. 4.

The Wisconsin Teachers' Agency at its last meeting appointed a committee to study the question of providing proper home facilities for non-resident pupils in high schools. This is a movement in the right direction. There is great need in many communities for better home facilities for high school boys and girls. In certain places we have visited, young boys and girls are not properly safe-guarded in their physical, social, or moral life in the cities or villages in which they are attending school. They find their home in a hit or miss way; and then they are not looked after properly by people who have a personal interest in them, or who are officially appointed to keep track of them.

We were looking over the high school in a small city last winter, and we learned that a third or so of the pupils in the school had come from a distance, and most of them were staying in the city from Monday morning until Friday night. We heard some of these pupils talk about their experiences in the city, and one or two of them gave the impression that they had no home life. Their living quarters were not suitable for young people attending school; and they could go and come as they chose, and no one would be any the wiser for it. Conditions were probably particularly unfavorable in this small city; but they are not likely to be wholly satisfactory in any place unless special effort is made to find agreeable homes in which the boys and girls will be looked after in a personal way by people who are interested in them.

If the committee appointed to study this matter can suggest a feasible plan for providing real home life for non-resident high-school pupils it will mark a big advance in the high school work in the smaller communities in this state, and even in some of the larger ones where the high schools have many pupils from abroad.

SCHOOL CREDIT FOR HOME WORK IN HOME ECONOMICS

GRACE SCHERMERHORN

Director in Home Economics, Iowa State College

This plan for home credit was first worked out by the Home Economics teachers of the Iowa State College, with help and suggestions from the superintendent of the Ames public schools. It was then discussed in each Parent-Teachers Association in the town. The town people were much interested. They criticized freely, gave many good suggestions, and promised their most hearty coöperation.

After much discussion the final plan was made and put into practice. This is the first year the system has been used, and so we cannot say that it *has* worked well, but we can say most enthusiastically that it *is* working well. The college practice teaching in Home Economics is done in the Ames city schools, under the direction of the department of Education of the College.

The purpose of giving school credit for home work is to bring the school and home into closer relation. We hope it may prove an incentive for the girl to do, at home, some of the things that she has learned at school. In this way she may carry into the home some new ways of working, and there will be an exchange of ideas between mother and daughter, as to the hows and whys of so doing, that will result beneficially to both. As the girl carries these ideas and discoveries back into the school we shall be able to know better the needs of her home and social life, and hence to so plan our work that it may "carry over" into her out-of-school life.

To be successful this home-school work requires the best interest and coöperation of the girl's family. This interest and coöperation we ask for in order that the school may most closely meet the needs of the child.

The plan at present provides for the following credits:

A total of 2 credits may be earned by home work in Home Economics, the value of 1 credit being 300 points. These credits will apply on high school graduation. Fractional credit will be given for part work.

Enough work must be done to make 1 credit in order to have the work apply on high school graduation.

The work may extend throughout the student's four year high school course.

General work should be reported each month, records kept each week.

A grade of 75, or "fair," is necessary for credit.

COOKERY

The total for cookery is $\frac{2}{3}$ credit—200 points. In each case the family recipe must be used (enough to serve six) and whenever possible a sample of the product brought to school for examination. The recipes, stating method and giving itemized cost, together with a statement from the guardian or parent saying the entire work was done by the girl, must accompany each dish brought in. Blanks will be provided for this.

Grading is to be made on the following: (a) appearance of the finished product, (b) taste, and (c) texture. In grading bread or cake the score card given to the class will be used, and product brought to school and marked by the teacher.

To girls who are taking, or who have completed, first year cookery, $\frac{1}{3}$ credit—100 points—will be given for 15 of the following dishes:

Some fresh vegetable cooked and served in a white sauce

Potatoes in some form

Tapioca

- Rice
- Macaroni
- Muffins
- *Baking powder biscuit
- *Plain cake, with or without frosting
- *Drop cookies
- *Rolled cookies
- *Pastry
- *Gelatine with soft custard
- Cottage cheese
- Scalloped dish
- Custard, or some kind of custard pudding (bread, rice, tapioca)
- Steamed brown bread
- *Prune whip } One of these required, the other chosen
- Marguerites }
- Fondant candies
- Salad with cooked or French dressing
- *Sandwiches—three kinds of filling
- *Bread
- *Baked beans

The ten starred dishes are required, and each receives 7 points credit; the other five may be chosen, and each receives 6 points credit.

To girls who are taking, or have completed, second year cookery, $\frac{1}{3}$ credit—100 points—will be given for 15 of the following dishes:

- *Canned fruit } One of these required, the other chosen.
- Preserves }
- Pickles }
- *Jelly
- *Bread
- *Parker House rolls
- *Sponge or angel cake
- Salad with mayonnaise served with some made salad wafer
- *Cooking 2 fresh vegetables
- *Roast meat
- Broiled steak
- Breaded chop
- Meat stew with dumplings
- *Meat substitutes—one dish required, one dish chosen.
- Creamed soups
- Two left-over dishes. Tell what you would serve with this dish to make a good luncheon or supper dish for your family
- Frozen dessert
- *Light dessert
- *Heavy dessert
- Boiled dinner

The ten starred dishes are required, and each receives 7 points credit; the other five may be chosen, and each receives 6 points credit.

GENERAL

The total for general housework is $\frac{2}{3}$ credits—200 points; work carried on for 8 months receives $\frac{1}{3}$ credit—100 points; work carried on for 16 months receives $\frac{2}{3}$ credit—200 points. The general work consists of the following:

1. Making girl's own bed each day, 3 points for 4 weeks.
2. Daily and weekly care of one bedroom, preferably girl's own room, $4\frac{1}{2}$ points for 4 weeks.
3. Helping with general housework one-half hour each day (sweeping, dusting, ironing, washing dishes, washing windows, etc.), 3 points for 4 weeks.
4. Helping with general housework one hour on Saturdays, 2 points for 4 weeks.

The total credits for general work are $12\frac{1}{2}$ points for 1 month. One task must be done for four weeks in order to get any credit.

SEWING.

The total for sewing is $\frac{2}{3}$ credit—200 points: any work may be chosen and credit will be given up to 200 points. To girls who are taking, or who have completed, first year sewing, $\frac{1}{3}$ credit—100 points—will be given from the following list:

	Points
Night gown.....	50
Drawers.....	50
Corset cover.....	50
Chemise.....	50
Underskirt.....	50
Darning.....	25
Mending.....	25
Child's apron.....	25
Child's dress.....	50

To girls who are taking, or who have completed, second year sewing, $\frac{1}{3}$ credit—100 points—will be given from the following list:

	Points
Princess slip.....	50
House dress.....	75
Shirt waist.....	50
Woolen skirt.....	75
Made-over dress.....	75
Nice dress.....	100

In all sewing the finished article is to be brought to school for examination, and it will be graded according to score cards used in the class. Girls have score cards in their note books, or they may be procured from the teacher.

Additional sewing and hand work may be done by arrangement with the teacher, who will decide points to be given for work.

CREDIT FOR HOME WORK AT ST. CLOUD, MINNESOTA¹

The Board of Education in St. Cloud, Minn., recently adopted a plan for giving credit for outside work toward graduation from the high school. The purpose of the plan is to unite the home and the school; to connect the work of the school with the life going on outside; and to encourage the pupils to spend a part of their spare time at some useful occupation. It is hoped that the plan will direct their work in a measure toward everyday, practical tasks; will train them for service, not merely help them in the acquisition of knowledge; and that they will become better fitted to meet the actual conditions around them, and for complete living. The ideal toward which all such work tends is industrial, social, and home efficiency.

The arrangements of credits for gaining the high school diploma are as follows:

Sixteen units are required for graduation, at least 15 of which shall be regular school credits. One credit may be granted for systematic and definite home or continuation work as outlined below.

Seventeen units are required for graduation with credit, two of which may be for home or continuation work. Standings must average pass plus or above 80.

Eighteen or more units are required for graduation with honor, three of which may be for home or continuation work. Standings must average pass double plus or above 90.

Pupils may graduate on the old plan, with 16 or more regular school units. To graduate with credit on this basis an average standing of pass plus must be obtained, and for graduation with honor, standing must average pass double plus.

OUTSIDE WORK

The following outside work when properly certified will receive credit as indicated: Regular weekly piano, violin, cornet, pipe organ or voice lessons, under an accredited instructor, $\frac{1}{4}$ unit per year for a period not to exceed four years; active membership in any high school or approved city musical organization, $\frac{1}{4}$ unit per year; high school glee club or chorus work, $\frac{1}{4}$ unit per year (credit for music work is limited to 1 $\frac{1}{2}$ units); literary society work, or rhetorical, debate, public speaking or expressive reading, $\frac{1}{4}$ unit per year; granite or paving block cut-

¹ Reprinted from *Manual Training Magazine*, xv, 1913, no. 2, December.

ting, or work in any of the local trades, shops, factories or industries, $\frac{1}{4}$ unit for each summer vacation; clerking in store, bank, bindery, publishing house or office, $\frac{1}{4}$ unit for three months; steady work on a farm, followed by a satisfactory essay on some agricultural subject, $\frac{1}{4}$ unit for three months; horticulture, gardening, poultry raising or bee culture with essay, $\frac{1}{4}$ unit for one season; raising one-fourth of an acre of onions, tomatoes, strawberries or celery, one acre of potatoes, two acres of pop corn, five acres of corn or alfalfa, $\frac{1}{4}$ unit; running a split road drag or doing other forms of road building for three months, $\frac{1}{4}$ unit; judging, with a degree of accuracy, the different types of horses, cattle and hogs, $\frac{1}{4}$ unit; selecting, drying and testing seed corn, $\frac{1}{4}$ unit; faithful definite work in the home, with well written essay on suitable topic, $\frac{1}{4}$ unit for three months; china painting, oil painting, crayon, burnt wood, art needle work or other handicraft or home decoration work, with exhibit, $\frac{1}{4}$ unit; three months' employment in a dressmaking establishment, $\frac{1}{4}$ unit; three months' employment as nurse, $\frac{1}{4}$ unit; three months' summer vacation travel, with written description, $\frac{1}{4}$ unit; "See Minnesota First" trip under approved instructor, with essay, $\frac{1}{4}$ unit.

HOME TASKS

The following home tasks when well done and certified by parent or guardian will represent $\frac{1}{4}$ of one unit or credit: Shingling or painting the house or barn; making a canoe or boat; swimming 300 feet at one continuous performance; installing three or more electrical conveniences in your mother's home; taking sole care of an automobile for one season; preparing one meal alone daily for three months; baking the bread for three months; cooking meat and eggs three ways and making three kinds of cake, with exhibit; making beds daily for three months; doing the laundry work weekly for three months; making a waist, dress or night-gown or other wearing apparel or articles for the home; making a hat or cap; keeping a flower garden, with ten choice varieties of flowers; recognizing and describing twenty different native birds, trees and flowers; sleeping for one year in the open air or with open window; keeping a systematic savings bank account for one year, with regular monthly deposits.

SCORE CARDS

A number of score cards have been received in response to the request in the February JOURNAL. It is hoped that more will be sent.

The following definitions and scores were prepared by Louise Stanley and May C. McDonald for use at the Missouri Home Makers' Conference.

CANNED GOODS

In the canned product we should aim to have fruit retain as nearly as possible its original shape and flavor. In the case of canned fruits the natural flavor of the fruit should not be hidden by the use of too much sugar. In general the percentage of sugar used should be the same as that found in the juice of the fruit.

Score card for canned fruit

Fruit:	
Shape.....	15
Color.....	15
Flavor.....	30
Juice:	
Flavor.....	15
Clearness and consistency.....	15
Proportion of fruit to juice.....	10
	100

Score card for canned vegetables

Flavor of vegetable.....	35
Condition of vegetable.....	35
Proportion of vegetable to juice.....	20
General appearance.....	10
	100

JELLY, PRESERVES, ETC.

"Ideal fruit jelly is a beautifully colored, transparent, palatable product obtained by so treating fruit juice that the resulting mass will quiver, not flow when removed from its mold; a product with texture so tender that it cuts easily with a spoon, and yet so firm that the angles thus produced retain their shape; a clear product that is neither syrupy, gummy, sticky, nor tough; neither is it brittle, yet it will break, and does this with a distinct, beautiful cleavage which leaves sparkling characteristic faces." This definition is given by Miss Goldthwaite in "Principles of Jelly Making."¹

The essential differences between preserves, jams, marmalades and butters are nowhere very clearly defined. Preserves, from the meaning of the word, originally meant the cooking of definite quantities of fruit and sugar, usually equal quantities, to such a consistency that the mass would keep without being hermetically sealed, that is, the concentration of sugar present would be sufficient to prevent the growth of any organisms. In preserves as the name also indicates, an attempt is also made to have the fruit keep as nearly as possible its original appearance and shape, and the effect of cooking in the sugar solution makes the fruit appear clear. In the preserves we can distinguish two essentially different parts, the fruit and the juice.

Jams differ from preserves in that, though the whole fruit is usually used, it is crushed in the juice so as to produce a homogeneous mixture. As a rule only the small fruits are utilized in jam making, for only in

¹ Principles of Jelly Making, *U. of Ill. Bul.*, vol. vii, no. 7.

these are we able to use the whole fruit. When we discard the seed and all or part of the skin the resulting product is a marmalade or butter. In a butter the pulp only is used and it is usually strained to remove any lumps and to distribute the pulp evenly through the juice. In a marmalade part of the peel or skin may be left in, and there are distinguishable two distinct portions, the clear juice and the particles of fruit.

The test as to when done should be, especially in cases where there is any tendency to jelly, the same as for jelly.

Score card for jelly

Color.....	10
Transparency.....	20
Taste.....	25
Consistency:	
Hold shape, not flow.....	15
Tender, will cut easily.....	15
Firm, angles retain shape.....	5
No signs of crystallization.....	10
	<hr/> 100

Score card for preserves

Fruit:	
Shape.....	10
Clearness and color.....	10
Flavor.....	15
Texture.....	10
Juice:	
Clearness and color.....	10
Flavor.....	15
Consistency.....	10
Proportion of juice.....	20
	<hr/> 100

Score card for jams

Homogeneity (even distributing of pulp and juice and seed).....	30
Consistency.....	30
Flavor.....	30
Color.....	10
	<hr/> 100

Score card for butters

Smoothness.....	30
Consistency.....	30
Flavor.....	30
Color.....	10
	<hr/> 100

Score card for marmalades

Homogeneity.....	15
Consistency.....	25
Clearness.....	20
Flavor.....	25
Color.....	15
	<hr/> 100

The following score cards were prepared by Martha T. Bell, for grading her senior classes in household arts and in domestic sanitation. The work was carried out in Demonstration Cottage and a borrowed house, for the College of Industrial Arts, Denton, Texas.

Score card for household management

I. Executive ability.....	20
Business basis (First things first).....	8
Initiative.....	6
Ability to assemble things as in a meal.....	6
II. Systematization.....	15
Division of labor—certain work for certain hours or days.....	5
Division of time—plan work for whole week, thus getting broad view of the whole scheme.....	5
Division of income. (As income was set amount, apportioning for different meals or guest days was the only item considered here)....	5
III. Economy.....	10
Time—waste through lack of concentration.....	3½
a. Dawdling at window without purpose	
b. Useless steps.	
Energy.....	3½
a. Unnecessary manipulations, as in dusting, sweeping, moving chairs	
b. Using too many utensils	
c. Standing when one could be seated	
Materials.....	3½
a. Using larger measures than needed	
b. Throwing away or leaving food in utensils	
c. Burning	
IV. Cleanliness and neatness.....	15
Rooms, furniture, utensils, linen.....	6
Manipulations.....	3
Person, clothes.....	6
V. Industry.....	20
Sense of values or first things first.....	8
Persistence.....	6
Speed.....	6
VI. Information.....	20

Score card for ideal house

I. Location.....	20
Character of neighborhood	
Elevation	
Adjacent streets and alleys; what wastes?	
Presence of smoke, dust, odors	
II. Grounds.....	10
Yard, front and back	
Presence of wastes, inorganic	
Care and disposal of wastes, organic, inorganic	
III. House	
A. Heating system.....	10
Economic view point	
Sanitary view point	
Aesthetic view point	
B. Ventilation.....	10
Affected by construction	
Affected by furnishings	
Affected by adjacent buildings	
C. Lighting.....	10
Natural; affected by	
a. Construction.....	3
b. Furnishings.....	2
Artificial	
a. Efficient.....	1½
b. Sanitary.....	1½
c. Aesthetic.....	1
d. Economic.....	1
D. Water supply.....	15
Purity affected by	
a. Source	
b. Habits of household	
E. Rooms.....	25
Construction.....	15
Furnishings.....	5
Care.....	5

Score card for cooking lesson

Hypothesis: Perfect concentration followed by the resultant, comprehension, evidenced in

I. General methods.....	50
Perfect measurements.....	10
Perfect use of utensils.....	5
Perfect manipulations.....	5
Perfect results through attention to processes as baking, freezing, etc., shown in flavor, form, and color of product.....	30

II. Food preparation	50
Waste of materials	10
a. Under or overcooking	
b. Throwing in garbage can	
c. Running over	
d. Leaving in utensil	
Waste of time	10
a. Useless manipulations	
b. Useless steps, dallying	
c. Doing last things first	
Waste of energy	10
Useless movements, as opening oven, walking, etc.	
Neatness—desks, dishes, manipulations	10
System and quiet work	10

THE SCHOOL FOR HOUSEMAIDS IN DENMARK

GEORGE NESTLER TRIOCHE

The need of well-trained servants is as keenly felt, nowadays, in Europe as in America. The only difference between the old world and the new, in this respect, seems to be that in the United States higher wages are paid for poorer service. The trouble everywhere is that housemaids and cooks do not receive a suitable training and have often no way to acquire it. In Denmark at a time when people were less busy, or rather less hurried, a great many young girls were instructed in domestic science, little by little, on the farms or in small country homes, by good and patient housewives. They were willing to receive a very moderate compensation, or none at all, for the sake of making their apprenticeship. This is now a thing of the past. The prospective housemaid, like everyone else, wants to make money as quickly as possible. As servants are always in demand, she seeks, and generally has no trouble in obtaining a situation for which she has little or no qualification.

Since home training no more exists, the only way out of the difficulty is the professional school. It is hoped that the competition of graduates from such establishments will soon oblige the rank and file of servants to join the school or else to be satisfied with a smaller salary—that of the unskilled.

In Denmark, this remedy is already out of the experimental stage. It should be noticed that the first efforts toward a regular, systematic training were made by servants themselves. The Servants' Association founded at Copenhagen in 1901, opened five years later a pro-

fessional school under the auspices of several wealthy and influential ladies of the place, 15,000 francs (about \$2884) being devoted to the organization and maintenance of the establishment. At first, a single floor was rented in an office building but it was soon necessary to move to larger quarters.

In 1913, there were eighteen pupils in the Copenhagen School, divided into three classes: cooking, general housework, washing and ironing. The course lasts six months, but pupils pass every week from one class to another; for instance, after seven days spent in the cooking class, they are sent to the housework class for another week, then to the laundry, and come back to the first class on the fourth week.

In the cooking class, they have to prepare and serve a two or three course meal for six people, and do the marketing for it. And marketing in Denmark is what Americans would call "the real thing." It does not mean the ordering by "phone" of goods which one sees only when they are brought home, too late to be sent back if not satisfactory; it means going out, in any kind of weather, choosing foods oneself, bargaining on the market place with truck gardeners or fish-mongers, and bringing the purchases home in a basket. The course in the housework class implies learning the care of two rooms and a waitress' duties. In the laundry class, pupils wash, iron and mend their own clothes. When the course of six months is completed, the girls who have passed the examination are granted a diploma.

At the beginning, there were no charges for tuition, but in 1910 it was deemed necessary to require a fee of 10 crowns (about \$2.70) per month. Since 1906, 194 pupils have graduated. Since the association opened a supplementary course for cooks and another for lady's maids (for 305 and 27 pupils respectively), the total number of girls taught in the Copenhagen School has increased to 526. Financially, the institution like other philanthropic undertakings, is not a success. The annual deficit is made up, chiefly, by subsidies from the state and the city (\$534 each, per year). Lately, this school has opened a small restaurant where from 70 to 80 people take their breakfast or noon meal every day. "Outside washing" is also accepted by the laundry department; and cakes, bread, and delicatessen made by the cooking classes are now sold to the public. In that manner, the deficit was, in 1913, reduced to about \$1480. It is said that other cities are contemplating the opening of schools similar to that of Copenhagen.

THE WORK OF THE HOME ECONOMICS DEPARTMENT, GENERAL FEDERATION OF WOMEN'S CLUBS

HELEN LOUISE JOHNSON

Prof. Simon Patten has said that "the battle for reform is more than half won when a substantial number of people use the same terms in talking of it. We see as individuals. We socialize as we use a common language." The unsocialized condition of Home Economics can be illustrated by the experience of the chairman of this department who was graduated from the *domestic science* department of one college and studied in the *household administration* department of another. She then taught in the *household science* department of a college, going from there to the *domestic economy* department of a college in the same state, and returning to an eastern college to open a department of *Home Economics*. Should she now return to her original college she would be in the *School of Household Arts*. This is an absurdity, and explains much of the misunderstanding of this educational movement.

The members of the American Home Economics Association must know that the recommendation of the committee appointed from that body and the National Educational Association was for the universal adoption of Home Economics as being the most comprehensive name for this body of subjects.

We know of no greater assistance which could be given this cause all over the country than for the leaders and teachers of Home Economics to read and adopt the recommendation of that committee on nomenclature and thereby establish at least a common basis of understanding in relation to terms. The American Home Economics Association must do this, for no one group of teachers, no one state, no one person, can make much impression. It is a question of socializing; a matter of reform, and upon it much depends.

In October a letter was sent from this committee to the presidents of all state federations whose annual meetings occurred this fall. This letter requested action on four things. The first among these was the adoption of the name Home Economics in the State departments of this character, in order that the clubs of each state may be urged to use, for this group of subjects, the uniform name which has been approved by the American Home Economics Association and others of like character. The response to this was immediate and general, many of the states voting to change the name from household to Home Economics as suggested.

We are now about to send this request to the clubs in general in order to pave the way for that better understanding of the scope and meaning of Home Economics, which it is hoped will result in work of a more uniform character and grade throughout our public schools.

It should be unnecessary to explain the great need of compulsory education of this character in the grades. Only about 1 per cent of the girls and boys of this great country go to college. Some 10 per cent are able to go through high school. About 90 per cent leave school at the end of the compulsory age. This means that the majority of girls attending our public schools leave school for work of some character at the ages of thirteen to sixteen, and even younger. Many of these children have no opportunity whatever for learning good methods of carrying on those activities on which the home depends, unless they can be taught in school. There is no use in citing the old argument that girls should learn to cook, and to sew, and to clean, and to wash dishes, and to make beds in the home. Whatever they should do, they no longer learn those things there, and in a multitude of instances there is no opportunity to do so. Housekeeping and cooking, the care of babies, and the wise expenditure of money for healthful, nutritious food no more come by instinct just because a girl has become a wife and mother, than successfully running a department store comes by instinct to a man because he has become a husband and father. The details of each business are learned through experience but there is but one safe time to acquire that experience, and that is before life and living may be wrecked in the learning how.

This all has to do with another recommendation relating to the granting of entrance credits in Home Economics by the colleges not now accepting them. The committee on College Entrance Requirements appointed at the Boston meeting of the National Educational Association reported on manual training and Home Economics together, hence it is somewhat difficult to select the direct data in regard to this latter subject.

At the time the report was made, twenty-eight co-educational institutions accepted from girls two or more units of household science and art for entrance credit. This list included such important universities as those of Chicago, Wisconsin, Minnesota, California, and Cincinnati. In addition, forty-three more colleges and universities accepted household science and art in different amounts, the maximum being four units, the minimum one. This list included the Universities of Illinois, Michigan, Nebraska, Ohio State, Northwestern, Ohio

Wesleyan, and others. There were some fifteen other institutions which accepted such credits in varying amounts, one of these being Columbia, another Cornell University. Twenty-five more would accept drawing, but no household science or art; six more were indefinite.

One hundred and eighty-eight institutions were investigated and out of these sixty-two give no credit for drawing, shopwork, household science or art. This list includes Wells, Vassar, Wellesley, Smith, Mount Holyoke, Bryn Mawr, Oberlin, Williams, Amherst, Princeton and Yale.

The committee also reported upon an increasing tendency for independence of courses in high schools throughout the country, a better understanding of the actual needs of their students, a recognition of the broader functions of the high schools and an evinced intention of cultivating purpose, habit of application, power, originality and discriminating judgment, rather than a clinging to the traditionary studies and methods of former years.

In the West greater latitude is permitted in many respects, especially in states not hampered by regents examinations, but in any school the student, quickly inoculated as to the value of credits, will not select an important *life* subject if it has no credit.

This Department of the Federation has been requested to coöperate in securing these credits in the colleges attended by women. What stands in the way? In the first place, it is necessary that high school work in Home Economics should be deserving of high school credit. In high school, no more than in college, should work be accepted and credited which in fact belongs to a lower school or grade. If there is high school mathematics prescribed and uniform, then to the same degree must there be high school Home Economics. Mere cooking is not high school work, even where it implies a degree of skill. And it is lack of uniformity of agreement as to what shall be taught and when, which delays the granting of credits in many places.

This difficulty must be met. The women's clubs in their immense organization can undoubtedly succeed in creating a quite universal demand for these credits when it is time to proceed. It is however unwise to move too rapidly in this. There are a dozen considerations, all relating to the teaching of these subjects to be taken into account. The American Home Economics Association, and the Home Economics Department of the General Federation should collaborate and work together on this problem, and it might be wise to suggest a committee made up of members from these two organizations to formulate a plan of work.

EDITORIALS

In the next Biennial of the General Federation of Women's Clubs to be held this year in Chicago, June 9-19, the Home Economics Department will celebrate the twentieth anniversary **Twenty Years** of the beginning of Club Work in what was then **of Home Eco-** called Domestic Economy or Domestic Science which **nomics** started in that city in a National Housekeepers' Convention in October 1893, and out of which was to be evolved the National Household Economic Association.

Your editor was present and took part in this wholly new effort to bring to the age-old, inherited occupation of women the benefit of intelligent public discussion. Some hundred women gathered in the little auditorium with raised seats for the two day convention. Prominent among them was Mrs. Melusina Fay Pierce of Cambridge whose series of brilliant articles on Coöperative Housekeeping published in the Atlantic Monthly some twenty years before had brought the subject of housekeeping into the field of economics and gained for it a breadth of treatment hitherto unknown. It ceased to be from that time a back-door subject. But it was still too early to obtain from a group of practical housekeepers any discussion of their business on wholly new lines, and Mrs. Pierce's eloquent plea for the starting of household industries as laundry and cooking on the coöperative plan aroused no answering enthusiasm.

All of the papers, no matter what their subject, found their way by direct or circuitous route to the servant question; that alone held the interest of the audience and the most applauded remedy for bad conditions was that of the Golden Rule. Few of those present seemed to realize that there was any relation between this servant problem and the fact that steerage passengers were already coming not from Ireland and North Germany as in the fifties, but from southern and south-eastern Europe, also that 300 new occupations had been opened to women in the last fifty years. Few saw that this question of house service was not a personal question at all and that the Golden Rule alone could not meet it, that it was simply an outlying part of the great unsolved question of capital and labor with which the economists and statisticians are always wrestling.

Those whose memory covers the social and educational advances of these two decades see a great change in the attitude of the intelligent woman to her business of housekeeping. She has lagged even more than her companion in backwardness, the farmer, in grasping her relation to modern discovery and invention, but the poor hit-and-miss farming of the past has become the scientific agriculture of today and housekeeping has heard the word of advance along the same lines.

The great number of college-trained women that have come in these twenty years to preside over homes has also done much to bring about the difference. They have attained the broader view, they have at least an inkling of the scientific method. But still more has been accomplished by the now well-equipped schools for teaching the household arts in the public schools and for giving higher education in these subjects in the agricultural and state colleges and normal schools and in special institutes and also by the popular and technical bulletins issued by the Department of Agriculture and the experiment stations. Information is now obtainable on every line of practical application to the needs of the household, information that is not guess-work nor from left-over text books of fifty years ago, but abreast with the times. She may avail herself of movable schools and correspondence courses, all of which are to be greatly increased through Federal appropriations if Congress passes (as it now seems certain) the Lever-Smith bill which gives an appropriation of \$10,000, to be increased to \$50,000, to each state, contingent upon the state's granting similar amounts for extension teaching in agriculture and Home Economics. How to house and clothe and feed her family the woman may learn from undoubtedly correct sources.

At the very time when this first housekeepers' conference was applying in full faith the Golden Rule as the sovereign remedy for the only condition in which there was universal interest, the systematic study of nutrition was begun in the United States under Professor Atwater, with the result that the general government has taken up not only the study of food and nutrition but many other fundamental problems of home life including various aspects of clothing, shelter, and household management. Old facts of chemistry, physics, and biology have been taken out of their original setting and expressed in the housekeeper's terms; hence clear and definite directions for bread making, fruit canning, intelligible dietary standards for old and young, the idle, and the hard working; and much light shed on the kitchen and table superstitions of yesterday. As a result of scientific researches of the

last twenty years the housekeeper knows the relation of flies and other insect pests to the spread of disease and just why and how she must fight them; she knows that fly-borne infections are in most cases responsible for the dread connected with the babies "second summer;" she knows that unclean hands and dust and dirt are dangerous as well as disagreeable, and why; she knows her friends and foes in bacterial life. Laboratory science has given her knowledge of the wearing quality of the materials she uses for clothing and of good and poor colors in textiles. New materials and new glazes for cooking utensils are at hand as the result of scientific work; and hygiene has added its requirements to those of use and beauty in the construction of our dwellings.

The mother or teacher of twenty years ago could hardly go beyond sewing and cooking (the results of the latter art to be judged chiefly by the palate), but now the teacher finds a back-ground of science and a wealth of material to assist in the study of all the household arts. The Domestic Art field, which in 1893 had no scientific background now has its laboratory courses in textile chemistry and microscopy.

By these means, the study of the house, its equipment and its management has now attained the dignity once reserved for remote fields of knowledge. The JOURNAL stands for the application of all this knowledge; the average housekeeper has only just begun to use it, the household machinery is still cumbrous and complicated, and we have yet to work out the relation of the home to all outside helps, and to learn the tremendous power of the consumer when educated to demand well-built houses and efficient equipment for running them.

The generation now in the saddle must work out these problems; it owes a duty to those trusting young couples who take out marriage licenses at the court house.

One of the essential tools in any type of scientific work—using "scientific" in its broadest sense—is the bibliographical tool. This means not only a collection of books, but the ability to find **Bibliographies** out what printed matter is available on any given subject. Such ability develops only with experience. It has at its base the knowledge of the use of published bibliographies, of indices, tables of contents, card catalogues, and all devices for listing books. Unless the work is done satisfactorily by some available library, it means a card reference list to such material. Many times those working in Home Economics decide on the use of a

certain reference or text book in some one of their subjects only because one person has recommended it. No such decision should ever be made without a knowledge of all available books and of their comparative merits, uses, and weak and strong points.

For such purposes annotated bibliographies are of the greatest importance, and the JOURNAL reviews offer valuable material for such annotation. The Bibliography of Current Literature published in every JOURNAL is invaluable in keeping the knowledge of possibilities up to date. The JOURNAL prints, for those who subscribe 50 cents a year, extra copies on one side of the paper, so that the titles may be cut and mounted on cards. Some of the books or articles listed may seem at the moment of little interest to a given person, but the very items at first disregarded may become of great importance at some other time. Certainly no school can afford to be without this material, classified and arranged for ready reference.

The plan of organization of the American Home Economics Association provides that affiliated societies may be formed in cities, states, or institutions, and that affiliation may be had with

Affiliated the national organization if ten members of the local
Associations society are members of the national organization.

There are already a large number of local societies so affiliated. Just what purpose these local societies can best serve and what program of work they shall adopt has always been a question of importance. The Committee on Organization of the Association has this matter under consideration and doubtless a report will be forthcoming at the Cleveland Convention. Meanwhile the JOURNAL offers the following suggestions.

Local societies will find it well to specialize each year on some particular subject. Variety is enjoyable but accomplishment waits upon a definite purpose. Our local societies ought not alone to provide meetings with programs but ought also to undertake definite efforts for some progressive action. As for example, the study of home economic legislation in their own state and the securing of reform. Each local society should in time, affiliate with itself a section devoted to housekeepers which would hold its own meetings and undertake progressive work of a nature suggested by the Housekeepers' Department of the JOURNAL. In the larger cities, institution management sections ought also to be organized by the local societies to coöperate with the Administration Section of the Association. Everywhere

local societies ought to coöperate with public libraries and see not only that the JOURNAL is received regularly, but that a definite reference shelf for the housekeeper is provided and that new books are added promptly. We should like to see some local society undertaking coöperation with the local newspaper to the end that an improved woman's page or column may be developed. An inquiry to this end has recently come to us from a Montana woman's club. Local clubs will do well to provide an opportunity for at least one social gathering a year, preferably a luncheon, at which some definite topic of importance can be considered. Finally, report plans and results to the JOURNAL in order that all may benefit.

Members of the Association are asked to coöperate in the continued effort to advance the Richards Fund. This should be supported not alone as a memorial to the founder of our work but

Richards	also to establish an agency which will provide funds
Memorial	for the research and publication which are so sorely
Fund	needed in a new movement like ours. We have
	already published a Syllabus of Home Economics, a
	reprint on The Richards Memorial Fund, and a reprint on Richards
	Day.

The student organizations in our universities, colleges, and normal schools should all plan during the academic year of 1914-1915 to arrange a benefit of some kind which will result in a school or community contribution for the fund. For this purpose, the Richards Committee has under preparation a plan for a historical pageant and full information about it will be supplied to schools early in the fall. It will provide a suitable observance of Richards-Rumford Day. Many schools are finding it desirable to place this later in the year than December 3, Mrs. Richards' birthday, since the new students are not by that time fully acquainted with the Home Economics idea.

HOUSEKEEPERS' DEPARTMENT

The editors of the JOURNAL earnestly request assistance from the readers of this new department. They especially desire suggestions for timely topics on which information should be gathered; data either given directly or by reference to books and articles; and records of personal observation.

It is the present policy of the JOURNAL to give to its readers, in each issue, news of the progress being made in coöperative buying. There is abundant proof that coöperative stores, so long a success in Europe and especially in England, are to be tried in this country. "Why has every attempt at coöperation failed in America?" was asked two years ago of the Edinburgh coöperative store which has 42,000 members and whose sales are now seven and one half million dollars a year. "Because your people will not put themselves out to save a penny" was the prompt reply. Has the rising cost of living brought about a new attitude and a new resolve?

To those who would know of the first steps in starting coöperative buying with a very moderate capital, the following report will be of great interest. It will be noted that it is still in that stage of experiment when the initial enthusiasm of the promoters provides the time and energy for superintendence. Making the change to fully paid management is an important and difficult step.

THE CIVIL SERVICE COÖPERATORS OF WASHINGTON, D. C.

HOWARD L. AND CORA S. KNIGHT

It is coming to be generally realized that the present methods of buying household necessities inevitably add to the cost of goods to a degree which thrifty people would be glad to escape. In Washington nearly 1600 grocery stores are listed in the city directory which for a city of approximately 66,000 families is one for about forty families. They have to meet the cost of frequent deliveries and loss of bad debts since the custom of monthly accounts is very widely followed. These with all other expenses of business must be paid by the customer who also yields to the temptation to order by telephone, a method which undoubtedly adds to weekly bills since it does not require her personal scrutiny of what she is buying.

Coöperation, long a sort of standard remedy in such conditions, has been frequently attempted in Washington. One ill-fated plan in particular, under which a store with clothing, boots and shoes, meat, gro-

ceries, etc., was carried on, is now only a painful memory to those who supplied the initial capital for the venture. In a way, however, this and other enterprises served a useful purpose in pointing out both the merits of coöperation and also the many pitfalls in the path of would-be coöperators. Scarcely had it closed its doors when the plan here described was begun in a very modest way.

A few government employees found in 1911 that they could, by clubbing together, buy smoked hams and bacon of superior quality at a substantial saving. A canvass of several bureaus resulted in a considerable number of orders, and purchases to fill them were then made by those originally interested who assumed financial responsibility as well as the burden of distribution of goods, collections, etc.

At the start the goods were taken weekly to a central point and from there carried home by the purchasers; but when a supply of high grade butter was obtained and the volume of business became greater, a more formal organization, a regular office and weekly deliveries became indispensable.

The outcome was the organization, December 4, 1911, of coöperative buying by the Civil Service Council, an association made up of government employees. The annual dues were \$1 and it had for its object the promotion of social acquaintance as well as the organization of coöperative undertakings.

The purchasers from the store soon found that under the plan followed they were receiving goods of high grade and in full quantity, and were also making substantial savings. Economically, however, the plan was admittedly only a makeshift. The members had contributed practically no capital, the necessary funds being still advanced by a few people specially interested, most of whom were also contributing much time in connection with purchases, book-keeping, make up of orders, and in similar ways. It was, therefore, merely an instance of a few temporarily carrying the responsibilities and duties for the many who were being benefited, and not true coöperation at all. Another disadvantage was that legally the enterprise was a joint stock company, so that in the event of failure each member was liable for any debts contracted.

Efforts at incorporation were begun, and after considerable delay, due mainly to the fact that corporation laws in most states have not yet recognized the fundamental principles of coöperation, the Council became, on February 25, 1913, a corporation of the District of Columbia, under the name of Civil Service Coöperators, Inc., with power

to conduct a "general grocery and merchandise store and all lawful business in any wise appertaining thereto or in connection therewith." Among its expressed objects were the following: to advance the common interests of its stockholders as consumers, through the conduct of a business on the coöperative plan, and to extend the practice of coöperation and to educate the public concerning its advantages and concerning other matters relating to the public welfare.

The capital stock of the company consists of 500 shares each of preferred and common stock with a par value respectively of \$5 and \$1 per share. One share of common stock is assigned to each member, who must also subscribe for one share of preferred stock, though he may pay for all but \$1 of the latter from the dividends on his share of common stock. Thus, this plan will eventually provide a paid-in capital of \$3000, but actually requires but \$2 in cash from new members. It was fully realized that \$3000 is a very small investment for an enterprise of this sort, and that operations would be considerably handicapped by the limited capital, but the previous failures have resulted in such skepticism as to the ultimate success of any coöperative plan, that it is very doubtful whether a sufficient number could have been interested had a large initial contribution been required.

Many supposedly coöperative undertakings in this country have come to grief by their eventual control by a few individuals, these sometimes even representing competitors. Unusual efforts were therefore made to guard against this contingency. Only one share of common stock is issued to any one stockholder. No limit is placed on the number of shares of preferred stock which may be held by one person, but the preferred stock is non-voting. A holder of common stock can cast but a single vote, and no voting proxies are allowed. Moreover, all transfers of common stock must be approved by the board of directors, and they have the additional right to call in at any time all shares held by a person who is acting contrary to the interests of the organization; they may also call in all shares in excess of one held by any person.

Dividends are to be paid annually from the net profits. Holders of the full-paid preferred shares first receive 6 per cent on their par value. Such of the remaining profits as the directors deem advisable may then be divided among holders of the common stock on the basis of their purchases during the previous year, except that holders of preferred stock receive double the share of non-holders.

The mode of conducting the business is as follows: A printed order

slip with list of goods on hand and prices is mailed to each member at the end of the week. This must be returned by the following Monday, together with a remittance for what is ordered. To simplify office work checks are requested in even dollars, and small balances are carried over from week to week. Orders are then made up and distributed by the company's teams on Thursday, Friday or Saturday. The store is centrally located and is open during the usual hours for purchases over the counter, as well. It also has a telephone, but this is regarded as a convenience for obtaining information, correcting errors, etc., and its use instead of the mail order is not encouraged.

The number of articles now carried is about 260, and is constantly being increased in response to requests from members, or as new opportunities arise. One of the recent innovations has been the arranging for delivery of eggs direct from producer to consumer by parcel post. This plan was begun as an experiment, but was received with enthusiasm, far more orders resulting than could be supplied. Very little breakage is reported, and the sources of supply are being perfected for fresh-killed poultry. The bulk of the goods handled consists of dry groceries, particularly canned and package goods, dried fruit, extracts, soaps, etc., although butter has remained the most popular item supplied. The superior grade of goods furnished has been one of the most attractive features of the store.

As to the scale of prices it may be said that the tendency among co-operators today is to avoid price-cutting, and to follow the prevailing rates, the excess to be returned to purchasers in the form of dividends. This is in harmony with the spirit of true coöperation, with which "bargain hunting" has little or nothing in common. However, what is described as a compromise course has been followed thus far. On many articles prices are considerably lower than the prevailing rates. Thus, on package goods usually sold at 10 cents, a 9-cent price is used; 25-cent goods are listed at 23 cents, and so on. Opportunity is also offered for substantial reductions on case lots and large quantities. On the other hand, some commodities are sold at approximately the regular rate, and a few are even higher. Sugar, for instance, on which, as is well known, grocers make little profit, can usually be bought for less money elsewhere, and a certain brand of soap which grocers sell at 5 cents and the Coöperators at $4\frac{1}{2}$ cents, may always be bought at a local department store for 4 cents.

The question of raising all prices to the current level is under dis-

cussion, but however it may be decided for the future, the writers believe the past procedure has been a wise policy, and that it is an instance of where expediency is wiser than strict adherence to academic principles. A movement of this sort must grow by the addition of new members, and the local conditions demand inducements more tangible than the possibilities of faraway dividends. Nor should the preference of the would-be patron for the "bird in the hand" be too severely criticised, especially when it is realized that the system has some fancied disadvantages and others which are more real.

To the average city housekeeper the plan of weekly orders and deliveries seems pitifully primitive and inadequate. But this inconvenience is due to the necessity of starting in a small way. If the enterprise grows, the larger capital obtained will enable the store to meet all the needs of the coöperators by a daily delivery.

Less than a year has elapsed since incorporation, but some interesting results are already reported. With the prevailing system of management and scale of prices the running expenses amount to about 14 per cent of the returns from sales. The rent item, well recognized as one of the heaviest overhead charges in the usual retail store, constitutes but 8 per cent, office expenses 7.4 per cent and delivery costs 2.9 per cent. The remainder is largely used for printing the weekly order slips and the very useful circular of information which accompanies them and for numerous miscellaneous items. The buyer and manager receive a moderate salary, to be increased as the business grows. After paying the original cost of the goods the balance is available as profits. The business has grown steadily, the receipts in January being \$500 a week, and is increasing constantly, and at the annual meeting, January 21, 1914, the full 6 per cent dividend was declared on the preferred stock; interest on the common stock will doubtless be paid during the year. If the project fails no member will have suffered serious financial loss; in fact, his savings have doubtless already amounted to as much as the capital contributed in nearly every case, and he has benefited in numerous ways. If it succeeds, an alternative to the present methods of retail store management will have been made available, and this should be of considerable economic advantage to all concerned.

EQUIPMENT AND ITS RELATION TO HOME-MAKING

GEORGIE BOYNTON CHILD

An exaggerated instance of failure to have equipment suited to her conditions was illustrated in the case of a woman who moved from a comfortable roomy house in the country to an apartment in Brooklyn. Into the tiny rooms went double beds and bureaus and couches, so that her apartment was a very unpleasant place to live in, the congestion causing great disturbance of spirit. But we do not have to take extreme instances to prove that there are very few homes today so equipped that they can be operated with the minimum of labor. So many things have to be taken into consideration in fitting out a house, the limitations of the house, the amount of money available for purchasing the outfit, the cost of repairs and the operating expenses, and above all the amount of labor that will be saved by a wise adjustment of all these factors.

The equipment that has the most direct bearing on the running expenses and affects most seriously the comfort of the home-maker and the members of the household, is the equipment of the kitchen. This in a way determines the operating expenses. In many cases a well-planned kitchen with equipment properly selected and rightly grouped makes it possible for a woman to do without domestic service when differently equipped she would be obliged to keep resident help. In many cases it has been possible for families who have kept three or more domestic workers to keep only one, depending on help hired by the day for all extra service that is needed. In one case, known to the writer, where the household was reorganized on these lines the saving was several hundred dollars a year in money, with a gain of great peace to the household and of added freedom to the home-maker. In another family the saving in money nearly doubled that amount, being nearly two thousand dollars a year. This seems impossible until we reflect that one domestic worker costs in board and wages nearly five hundred dollars a year and that a far greater percentage of waste takes place where two or more domestics are kept. It is more difficult for families keeping only one maid to get competent general house-workers. There is therefore every incentive for such families to get the benefit that comes from the new methods of organization and from the new resources that are offered today in labor-saving equipment so that they may be independent of resident labor.

It is no easy matter to master this question of equipment, but it is

very important that it be mastered, for it places the home-maker in command of the situation and enables her to solve in a constructive way the problems that are summed up in "the high cost of living."

Home-making calls for love, intelligence and expert training. Very often women who are abundantly endowed with the right thought and intelligence to make the most perfect kind of homes have not had the training to master the technique and are discouraged by its complexity. There are so many homely facts to be reckoned with, so much apparently unimportant detail to be covered, that the task seems hopeless. And so they drift along and let their lives and their home-making be controlled by circumstances. All that is needed to transform such homes is willingness to look at the problem from a different point of view; to see that mastery of the work we have chosen is the first step to a self-mastery that vitally affects our character that will do much toward creating right ideals in our children; and that will do more for the world at large than any work outside the home, however brilliant, if undertaken at the expense of the responsibilities we assumed when we started out in married life.

DO "MODERN CONVENIENCES" PAY?

A valuable comparison, as to cost of service, between old and new methods of house building and fitting is furnished by Jessie Carey in a recently published article.¹ Under the title of *The House and the Art of Living in It*, she describes her London house as she has built it in order to bring "a more logical adjustment of domestic life to existing circumstances," among which latter she enumerates the taking up by women of new social and public duties so that they have not the old leisure to supply deficiencies in house service which are following its increasing cost and the decreasing number of hours per week which the servant is willing to work. She anticipates still further increase in wages, an eight-hour day, and a compulsory weekly holiday. And this is in a country which to the American eye has no servant problem. It would be well for us in the United States to face coming conditions as frankly as does this English woman.

Her way of meeting the situation is to reform the house and thus diminish the work to be done in it, for it is in the upkeep and the running of the house that extravagance or economy has its rôle. This author assumes, by the way, that your expenditure will be ten times your

¹*Contemporary Review*, 104, 1913, Sept., pp. 395-403. Littell's *Living Age*, 7 ser. 62, 1913, no. 3627, pp. 109-116.

rental, a statement which if true should be added to our scanty list of facts as to the division of the income. In short, to spend in new arrangement and equipment not a small sum but enough so that a house can do without one of the maids now employed will be a true economy. The wages, food and laundry of one maid being reckoned in London at £60 or \$300 a year, the amount saved in twenty years, or \$6000, it is calculated would cover the cost of all needed labor saving devices and their upkeep whether in permanent building or appliances.

The ideal is that every house should be so made and fitted that a gentlewoman can do all the work in it; hard and dirty work, as the carrying of coal and water and the scrubbing of rough wooden floors being avoided in the following ways; by supplying hot water to every room at any moment and in any quantity by an automatic gas circulator installed for \$50 and run at far less cost than by burning coal in the kitchen range; the heat for upper rooms to be furnished by registers from below (and to sacrifice the beloved open fire is full proof that this Englishwoman has the courage of her convictions) while the labor usually put on floors is reduced to a daily dusting by laying parquetry at about double the cost of a good linoleum or \$2.25 a square yard, this flooring to be polished once or twice a year by a man from outside. Minor points insisted on are rounded corners in angles between floors and baseboard, in order to avoid dusty corners, and also white enamel faucets, polished wood for stair-rods, the use of more glass and china and less silver, all to avoid tedious polishing; the use of tiled walls for bath room, kitchen and pantry, of casseroles for cooking and of all possible small conveniences to save labor, as a cold water tap above the stove for filling kettles.

The writer also calls for smaller sized dish washers, potato parers and boot polishers to be placed on the market and suggests a commission to inquire into the methods of doing housework in all civilized countries.

In our American cities \$300 a year will pay only the wages of a maid; one-half to two-thirds more must be added for food and other expenses. Thus, the saving in doing with one less maid would amount in twenty years to approximately \$9000. If it pays in an English city to install costly apparatus to diminish housework, still more will it pay in our American houses.

Who will give us additional facts in this comparative study of costs? Meanwhile let us call for more women architects who should be better equipped than men for planning the house in which efficient labor is possible.

THE INTER-RELATION OF RAILWAY AND HOME SANITATION

The subject of railway sanitation seems at first thought to be far from the housekeeper's field of interest and responsibility, and yet in reality home sanitation and public sanitation of whatever kind act and react upon each other. Diseases may be transmitted from one home to another through the association of people in public places, and, thus, precautions in the home make for safety in public places and precautions in public places, for safety in the home.

There is another and equally important, though less direct, relation between private and public sanitation, which may be called educational. It is the carefully trained child, used to cleanliness in his own home, who is most likely to notice and to protest effectively against filthy practices in public places—on railway trains, for example, or in stations. On the other hand, conspicuous cleanliness in places where many people gather may teach lessons which will be helpful in home education. To illustrate: A woman, who from force of circumstances is accustomed to hearing hygiene and sanitation discussed almost daily, had never thought that water bottles for use on the table might be equipped with metal tops operated by levers, much like the cover of a syrup jug, until she saw such an arrangement on one of the Harvey dining cars of the Santa Fe Railroad. Such is the inertia of the human mind that she had taken for granted that fringed napkins, much more difficult to keep clean than metal tops, were the only possible means of protecting the water in the bottles from dust or from flies crawling in and around the neck of the bottle. Housekeepers, on the one hand, with abundant opportunity to study the problems of sanitation in their small domains, and railways companies, on the other, accustomed to doing things on vast scales and able to command the services of experts, must teach each other.

In April, 1913, Samuel Rea, the newly elected president of the Pennsylvania Railroad, issued the following order:

Waiters Must be Healthy; Those Having Communicable Ailments Must Leave.

The following extraordinary precautions against the transmission of communicable diseases by the dining car and restaurant employees have been adopted:

There is to be a quarterly physical examination of every employee who has anything to do with the preparation or serving of food. Dish washers, kitchen helpers, cooks, and waiters must undergo an examination every month, and only a 100 per cent report on their physical

condition will permit their remaining in the service, while those suffering from tuberculosis, diseases of the eye or skin, and any other communicable disease, may not be employed in any capacity in which they might come in contact with food; further precaution will be taken in debarring them from employment in places in which linens and tableware are kept.

Was this position well taken by the President of the Pennsylvania Railroad? In answer, we refer to one single piece of research work out of many which might be cited. S. L. Cummins, writing in a recent journal,¹ tells of his experiments made for the purpose of determining whether typhoid bacilli can be transmitted to food by means of the hand. His tests were made on persons known as typhoid fever carriers, *i.e.*, persons who are able to be about and at work, but who, nevertheless, carry with them the germs of typhoid fever which they excrete in the urine or the feces. One of these persons is likely at any time to apply for a position as cook or waiter. And, it is hardly necessary to say that his hands are liable to come in contact with his urine or with articles of clothing soiled by the urine. In order to determine how dangerous these people are, Cummins dipped the index finger of his right hand in the urine of a typhoid carrier (proved to contain 3,000,000,000 typhoid bacilli in every cubic centimeter, a volume about equal to that of a die used in playing backgammon). He then rinsed the finger in a strong disinfectant. Following this, he washed the finger first in cold and then in hot water. Even after this careful cleansing, much more careful than we expect of any waiter or cook, he found that some typhoid bacilli still remained on his finger. Going further, he washed his finger in absolute alcohol and, while the number of bacilli was greatly reduced, a few remained. With the less thorough washing which is customary, bacilli might easily be transmitted by a typhoid carrier to towels and from them to dishes and from the dishes to food. Cummins went still further with his study; he dipped only the very tip of his index finger in the urine of a typhoid carrier and then brought the finger in contact with a bowl of freshly prepared soup. The next day the soup was found to contain 15,500 typhoid bacilli to the cubic centimeter. In view of dangers of this kind, the action of the president of the Pennsylvania Railroad is greatly to be commended.

While we are on this disagreeable subject, which the "dainty-

¹*Journal of the Royal Army Medical Corps*, 20, 1913, p. 657.

mind," as some one has called them, refuse to consider, it may be well to ask whether there is any danger to the health of passengers from the sewage which, according to present methods, is deposited on the track from passing trains. In answer to this, we may cite the work of Stiles and Keister² which appeared recently in one of the Public Health Reports of the United States Public Health Service. These investigators say that it has been proved that not a small percentage of human beings are constantly eating human excreta—in small quantities it is true—but even so the condition is disgusting. Certain tiny organisms are found only in human excreta and can be transmitted from one human being to another only by this means. Stiles and Keister examined 187 persons, selected at random, and found that 30 per cent of those who lived in houses with outdoor privies were bearing these micro-organisms about in their persons, while only 20 per cent of those who lived in houses with indoor water-closets were infected. Of the latter, they say, many were found to be living near houses having outdoor privies, though not actually in such houses. In these cases flies are supposed to be the carriers. It is not reasonable to suppose that filth can be carried to a kitchen from a neighboring privy and not to a dining car from excreta lying on railway tracks. In view of these facts, it is encouraging to know that many of the western roads are screening their dining cars completely. Not only are the windows screened, but a screen door is placed in the narrow passageway which leads from the vestibule to the main part of the car.

The abundance of the literature on railway sanitation shows that the public is aroused. An editorial in the *Journal of the American Medical Association*³ deals with this important matter of the disposal of sewage of trains. It begins by commending, very justly, we think, the railroads for the advance they have made of late in applied sanitation. "The railways are indeed to be commended for their gradual introduction of hygienic regulations that keep their cars, in spite of the numbers of people who travel in them every day, in a state that is not likely to endanger health. There remains, however, one phase of railway sanitation that will soon have to be dealt with." The editorial proceeds to speak of the danger to health resulting from the scattering of sewage in towns and particularly of the fact that the sewage sometimes falls into streams connected with drinking supply of cities. It

²Public Health Rpts. 28, 1913, no. 48, pp. 2530-2534.

³*Journal of the American Medical Association*, 60, 1913, no. 11, p. 836.

states that the Pullman Company has already made arrangements for the disposal of sewage when cars stand on sidings in smaller towns waiting to be picked up by through express trains during the night, a fact which promises much for the future. Edward Hungerford, in a recent periodical,⁴ says that the Pullman Company attached to its staff some eight years ago Dr. Thomas R. Crowder of Chicago, who is making ventilation and sanitation of railway cars, particularly the disposal of sewage, his life work. He reports, however, that nothing satisfactory has as yet been devised as a holding vessel under the car for sewage. The trouble is to get something that will operate through the extremes of heat and cold. He makes the very good suggestion, however, that while experts are working on this problem, railways be required to floor the bridges over all streams that are even remotely connected with water supplies.

Certainly progress is being made, as is shown by one railroad sterilizing its drinking-water tanks, another spending \$46,000 in putting in water tanks in which water and ice do not come in contact, and another spending about \$15,000 in putting in tanks that are to be filled from the roof of the car only.

EFFICIENCY OF METHODS OF CLEANING

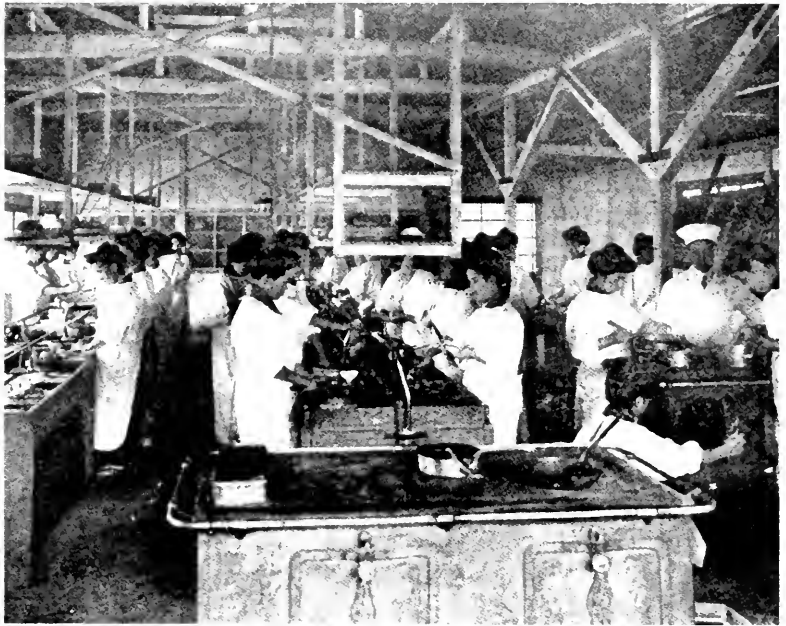
The sanitary value and efficiency of any method of cleaning depends upon the proportion of dust and bacteria which it removes from the rooms or furniture. Experiments of interest to the housekeeper have been carried out by W. D. Frost and Vermillion Armstrong⁵ at the University of Wisconsin which show the percentage of bacteria removed by the ordinary methods of cleaning and by the use of vacuum cleaners. They devised a method for determining the number of bacteria present on a floor by means of sterile gelatin disks, this method giving an accuracy of 99 per cent. The average number of bacteria found upon a dirty laboratory floor was about 76,450 per square inch; upon the garret stairs of a dormitory, about 76,260 per square inch; upon the floor of an ordinary room, about 7520 per square inch; on a stairway which had been recently cleaned, about 440 per square inch; and upon the floor of an exceptionally clean house where a vacuum cleaner had been used for some months, about 540 per square inch.

⁴ *Harper's Weekly*, 1914, February 7, pp. 21, 22, figs. 3.

⁵ *Jour. Proc. and Add., Nat. Ed. Assoc. U. S.*, 49th ann. meet., 1911, pp. 985-990; *Jour. Inf. Dis.*, 9, 1911, no. 3, pp. 265-275.



The Old Not Forgotten in the New Japanese University for Women: A Lesson in Tea-Making According to Ancient Traditions



In the Women's University at Tokio: A Cookery Class

To get an idea of the relative efficiency of the various methods of cleaning ordinarily used, the number of bacteria on a given area of a dirty floor was determined and found to be about 76,450 per square inch. An adjoining area of the same floor after being rubbed with a dry cloth was found to contain about 1030 bacteria per square inch, while another adjacent area, after being washed with a cloth rinsed out in very hot water, contained about 110 bacteria per square inch. Another neighboring area was washed with bichlorid of mercury (1-1000), then rinsed with sterile water and covered with a jar until dry, when it was found to be practically sterile. The average of the results of four experiments showed that a moderately clean floor contained about 385 bacteria per square inch before and about 90 bacteria per square inch after being swept with an ordinary broom, or an average removal of 77 per cent of the bacteria. While this percentage is large it must be said, in view of the results of other experiments, that a very large part of the bacteria removed from the floor go into the air and in a short time settle upon the floor and before long there are as many bacteria on the floor as before sweeping. Tests made with a patent oil-broom showed that the use of this device increased the number of bacteria on the floors which were very clean, due apparently to the difficulty of cleaning the broom. A reduction of only about 28 per cent of the bacteria was found on floors which had been swept by the aid of a patent sweeping compound.

The efficiency of several types of vacuum cleaners was determined. In the case of the two permanently installed systems tried, one, in which the vacuum was produced by an electric fan, removed about 92 per cent of the bacteria from a dirty floor and 96 per cent from a clean floor; the other, in which the vacuum was produced by a steam aspirator, removed about 72 per cent from a dirty floor and about 79 per cent from a fairly clean floor. Three portable machines in which the vacuum was produced by an electric fan, removed, on an average from 74 to 89 per cent of the bacteria from a clean floor. Two portable machines operated by a bellows gave an efficiency of 77 per cent in the case of a power machine and 57 per cent in the case of a hand-operated machine.

In the permanently installed machines the bacteria and dust are removed from the room entirely, and if the discharge pipe is properly located they cause no further trouble. In the case of the portable machines, however, in all the machines tested, the air was discharged back into the room after being filtered through a bag or some other

device to remove the dust. The experiments showed that the filtering devices would not efficiently remove the bacteria and in many cases they were forced through the bag back into the room, in some instances being thrown a distance of 6 feet. While the greater part of the bacteria present upon the floors are harmless, the portable machines might under certain conditions become a menace to health; for example, when used by traveling cleaners they might be the means of transporting the bacilli of tuberculosis from house to house.

Where the floor is washed with soap and water, rinsed with clean water, and the dirty water thrown into the sewer we have efficient cleaning with removal of the dirt and bacteria from the room. To secure bacteriological cleanliness, however, the floor must be washed with a solution containing some effective disinfectant, as is commonly done in hospitals, public institutions, and sick rooms where there is a possibility that the floors may contain the germs of infectious diseases; but this method is unnecessary in the ordinary house. This sterile condition, however, lasts only for a short time and the process must be repeated at intervals as the floor soon becomes infected again through use.

It must be remembered that the experiments here reported were carried out upon bare floors and while it appears that under these conditions the portable vacuum cleaners are not as efficient as the ordinary methods of cleaning in accomplishing the removal of bacteria, yet they require a much less amount of work. For use on carpeted floors, or upholstered surfaces, and for dusting, while not so efficient as the permanent systems, they are superior to the ordinary carpet sweeper, broom, and duster both as savers of energy and from the sanitary point of view.

The permanently installed systems of vacuum cleaning not only remove entirely the dirt and bacteria which they take from the room, but are much more efficient than the portable machines, since they clean more thoroughly and rapidly. They are much more sanitary than the ordinary methods of cleaning and require less expenditure of body energy. It is hoped that before long all up-to-date apartment houses will have permanently installed systems with pipes in each apartment so that the sweeping and dusting may be accomplished more efficiently and with a much greater saving of labor than that required by the methods commonly used. There is also much need for a medium-priced system operated by electricity or water power

which can be installed in the cellar of the ordinary residence with pipes and connections on each floor. It should be so built as to require little skill in operation.

THE BUYING OF CANNED FRUITS AND VEGETABLES¹

At present there are no uniform standards in the packing of canned goods, but it is important for the consumer to know whether her 10-cent can of tomatoes weighs 2 pounds and 8 ounces, or only 1 pound and 3 ounces; whether it contains one cup of liquid or two and a third cups; and whether the solid material weighs 11 ounces or 8 ounces. In some examinations of canned tomatoes, of three cans costing each 15 cents, the results were as follows:

<i>Measure of liquid</i>	<i>Weight of solid fruit</i>	<i>Cost of one pound of solid fruit</i>
15½ oz.	1 lb. 3½ oz.	\$0.123
1 lb. 2 oz.	1 lb.	0.15
12 oz.	1 lb. 11 oz.	0.088
and with two 10-cent cans the results were		
7½ oz.	8 oz.	0.20
1 lb. 2¼ oz.	12½ oz.	0.128

In examining these results it is readily seen that the cost of the can bears no definite relation to the value of the contents. Of two cans each costing 15 cents one contained two-thirds more solid fruit than the other. In the two 10-cent cans one can contained one-half more solid fruit than the other, and in the case of one of the 10-cent cans the cost per pound of solid fruit was 250 per cent of the cost of one of the 15-cent cans.

Although among dealers the sizes of canned goods are designated as 1's, 2's, 2½'s, 3's, and 10's, which undoubtedly at one time referred to the weight of the package, these numbers now have no reference to the weight of the contents, though this fact is not generally known to the consumer. The number 2's can may actually weigh 1 pound and 6 ounces; a number 3's 2 pounds 8 ounces, and a number 10's is above weight if it weighs 8 pounds.

The average consumer knows only whether she is buying a 25-cent can, a 15-cent can, or a 10-cent can of peas. If she buys the larger of two cans at the same price, she does not know which is the heavier; if it be the heavier she does not know until she opens it whether the extra

¹ Compiled from "Canned Foods: Fruits and Vegetables." Florence R. Corbett, Teachers College Bulletin, Ser. 4, No. 12.

weight is due to an excess of liquid, solidity of pack, or excessive weight in can and solder. This sort of buying is extravagant, and may well have some relation to the high cost of living.

Individual consumers and clubs interested in the control of the cost of living could do much to safe-guard the interests of the public by publishing the results of investigations made by themselves of goods sold in their local markets.

The methods for such investigations would be very simple and yet effectual. One or more cans of each brand of food obtainable should be purchased, and the information on the label fully recorded, with the name of the brand. The can should be weighed before opening, note taken of the price paid, and all observations carefully recorded. After the can is opened the contents should be emptied into a sieve, the empty can weighed, the liquid measured, and the solid contents weighed. Such data as these would help the consumer to buy wisely and well if she would be guided by her findings and buy food (solid matter) instead of water (juice); and these tests can be made by any housekeeper.

The housekeeper should, however, be relieved from any such labor by the canner who should adopt uniform standards and labels.

WHAT MATERIALS ARE BEST AND CHEAPEST¹

It pays to buy part-wool goods when firm and of good color, but not "all-wool" at 39 cents.

It pays to buy all-wool serges or flannels if they are well woven, but these cost at least 50 cents a yard, for 32-inch material. Anything cheaper is thin and easily pulled apart.

It pays to buy good mercerized foulards and mulls in place of cheap silk. They look like silk, are low in price, and in general wash well. Cheap silk is filled with other things that make it wear out quickly.

It pays to buy Indian Head cotton suiting. It looks like linen and wears better than "linen suiting."

It pays to buy good white lawns. They wear well and wash well.

It pays to make at home underclothes and nightgowns of good 9 to 12½ cent muslin but cheap lawns and cambrics are not worth making up.

It pays to buy good, narrow cotton or linen torchon lace for home-made underclothes. Such trimming is strong and inexpensive, but

¹ Extracts from Hints on Clothing. Mary Schenck Woolman, Teachers College Bulletin, Ser. 2, No. 13.

cheap "val" Mechlin and torchon laces and embroideries tear out in washing, and take time to iron.

It pays to buy good, closely knitted stockings. Two pairs of good stockings are better than four pairs of cheap, thin ones, which wear out quickly and are not easily mended. Always buy stockings that are big enough for the feet.

It pays to buy shoes of good leather and good shape. One pair of good shoes is better than two pairs of cheap, thin ones.

MATERIALS OFTEN ADULTERATED OR WEAK

Muslin filled with starch. The starch washes out and leaves a coarse, poor material.

Wool serges and suiting, 40-50 inches wide, under \$1. In all wool they are too thin to wear well; if adulterated with cotton they fade, soil and crease.

Cashmere, 36 inches wide, under 49 cents. Thin, tearing easily and wearing thin, and dye not holding.

Flannels, 30 inches wide, under 25 cents. Not warm enough, mixed with cotton.

Silk in taffetas, messalines and cords, 20 inches wide, under 75 cents. Not strong enough to stand wear, being weighted to seem heavy.

Velveteens, 22 inches wide, under 40 cents per yard, are poorly made with dye or stain stamped on top.

Plush for coats and upholstery. When cheap is made of cotton and will fade and soil quickly.

Blankets, good, all-wool, are at least \$4.50 a pair. When made of cotton they are less warm and soil quickly, and are often below standard size.

Towels, size 22 x 14, under 12 cents apiece are likely to be all or mostly cotton.

Fancy cottons with lace stripe.

Outing flannel in bright colors does not hold the color well and sometimes the dye poisons the skin.

Linen dress goods, when inexpensive, do not wear as well as cotton.

TESTING WEIGHTS AND MEASURES

During the last few years the various factors concerned in the cost of living have come very much to the front. An illustration is furnished by the work of one woman's club in the testing of weights and

measures. Twenty-one women undertook, with scales loaned for the purpose by a reliable manufacturing firm, to weigh for two months as much as possible of the food bought for their households. The results were tabulated and brought together. The tests covered several hundred weighings of meat, groceries, fruits, vegetables, and ice in nearly all quarters of a large city. A lecture by the Superintendent of Weights and Measures of a neighboring state had preceded this effort and also an exhibit from the City Comptroller's office of false weights and measures, so that the women were familiar with the subject. It was agreed that in cases of observed dishonesty the facts were to be handed over to the Comptroller's office for investigation without bringing the complainant into the case.

The results were interesting.

First, in the education of the buyer. It was found that many women did not know that in the state where the study was made they could require the weighing as well as the measuring of vegetables and some had yet to learn how many pounds a peck of potatoes should weigh. Emphasis was laid on the necessity of holding in mind the price of food by the pound of edible material. For instance, given cuts of meat must be repeatedly weighed, the edible part separated from bone and trimmings, before the inexperienced buyer learns to make the right mental calculation at the stall, before she realizes that what she has called a cheap cut at 16 cents a pound including the bone may be dearer than the one at 25 cents with little "trimmings," and that the weight of bone in a chicken is proportionately high. She also learns that for the real weight of package cereals the price is much higher than the apparent price, and that the sliced bacon in a 30-cent can may in reality cost 56 cents a pound.

Second, the buyer's general attitude either of trustfulness or suspicion toward dealers becomes more just because put on a better basis of actual fact. She has been told that 5 per cent of the marketmen, grocers and hucksters are dishonest. In the case cited, the results were quite different. Hardly 2 per cent were found to give short weight and this loss was almost balanced by the number of cases reported in which overweight was given. The conclusion drawn was that carelessness rather than intent to cheat was to blame in these instances. Only two instances of evident intent to cheat were reported to the office of weights and measures.

Incidentally, the point was brought out that household half-pint, pint, and quart measures are often defective and that anyone may get scales or measures tested without charge by city authorities.

It was considered of great importance to be brought in closer touch with one of the city departments, as these women were, and to learn of their methods to protect buyers and also to what extent the buyer may coöperate.

QUICK METHODS OF MIXING DOUGH

Several years ago experiments were carried on at the University of Chicago by Miss Wellman who found that much unnecessary time has been spent in cake-making. Cakes were made in two ways; by thoroughly creaming the butter and sugar and then adding the other ingredients; by melting the butter and beating it in after beating the other ingredients. Cakes mixed in the latter way and baked beside cakes of the same proportions mixed in the conventional manner could not be told apart in appearance or taste after baking, although the batter differed in appearance before baking.

Some further work showed that the whole question is one of getting the ingredients thoroughly mixed. In other tests made at the university repeated trials showed that melted shortening could be used in mixing baking powder biscuits if due care was used to beat it in thoroughly; and such biscuits compared favorably, both in texture and tenderness, with biscuits made by rubbing or cutting the shortening into the flour.

It is somewhat difficult to measure exactly the time saved by using melted butter in cake instead of creaming the butter with the sugar, or melted shortening in biscuits instead of rubbing shortening into the flour, for the time necessary for that process varies with the season and with the amounts used; but in these experiments it was found, on the average, to save half of the time required for mixing.

THE FEEDING OF YOUNG CHILDREN¹

Children's stomachs are not as strong as those of grown people and a child should not eat the same kind of food as an adult, any more than he should wear the same kind of clothes.

Milk is the best food for children of all ages; it contains everything needed to make a child grow, and every child should have at least one quart a day. This need not all be taken as a beverage; it may be used in cooking cereals and vegetables, or in making simple puddings.

¹ Extracts from *The Feeding of Young Children*. Mary Swartz Rose, Teachers College Bulletin, Ser. 2, No. 10. The prices have been revised to date.

A dish of cereal cooked three hours or more should also be given every day, preferably without sugar. Cereals made from the whole grain, such as rolled oats and rolled wheat, are better body-builders than those with the bran removed, such as farina, etc. Eggs, fruit, and fresh vegetables should form a part of every day's food.

Do not give meat to children under eight years of age if eggs and milk can be liberally provided. For the older children choose meat cooked without fat, as beefsteak, roast beef or mutton, chicken, fish free from fat, such as halibut, haddock, cod. Do not allow children to eat candy between meals. A small piece of pure candy or sweet chocolate may be allowed the older children with dessert for dinner. If children show a distaste for milk, cereals and other plain food, cut down the supply of sweets and other highly flavored food. The cultivation of a rational appetite is an important part of the training of children.

Never give fried food, pastry, hot bread, fresh rolls, or any cake except plain cookies, gingerbread, or sponge cake, and these latter only to older children in limited quantity. Syrups, preserves and nuts (unless ground to a paste) should not be given to children under 5 years old, and to older ones only sparingly. Allow no tea, coffee, beer, lemonade or sodawater. Children over six may drink weak cocoa or cocoa shells occasionally, making the beverage with milk.

MEALS FOR ONE DAY²

Child 2-4 Years Old

Breakfast:	Oatmeal mush	0.8 oz. dry cereal
7.30 a.m.	Milk	1½ cups
	Stale bread	1 slice
	Orange juice	4 tablespoons
Lunch:	Milk	1 cup
11 a.m.	Stale bread	1 slice
	Butter	1 teaspoon
Dinner:	Baked potato	1
1.00 p.m.	Boiled onions (mashed)	1
	Bread and butter	1 slice
	Milk to drink	1 cup
	Baked apple	1
Supper:	Boiled rice	1 cup
5.30 p.m.	Milk	¾ cup
	Bread and butter	1 slice

² Menus for older children will be given in the June JOURNAL.

Nutritive value and cost

MATERIAL	WEIGHT	PROTEIN	FUEL VALUE	COST
	<i>ounce</i>	<i>grams</i>	<i>calories</i>	<i>\$</i>
Rolled oats	0.8	4.2	100	0.0030
Stale bread	2.0	7.0	200	0.0080
Orange juice	2.0	...	25	0.0150
Butter	0.5	0.1	100	0.0110
Potato	2.6	1.3	50	0.0040
Onion	1.0	0.5	14	0.0030
Apple	2.0	0.2	26	0.0100
Sugar	0.2	...	23	0.0006
Rice	1.0	2.3	100	0.0050
Milk	34.4 (1 Qt.)	32.2	675	0.0900
		47.80	1313	0.1497

Substitutes or additions

For Rolled Oats or Rice: Other cereals, such as rolled wheat, wheaten grits, farina, hominy and corn meal.

For Orange Juice and Baked Apple: Prune pulp or apple sauce.

For Onions: Spinach, strained peas, stewed celery, carrots, or cauliflower tips.

An egg may be added every day, and should be included at least two or three times a week.

These changes will alter the cost somewhat.

SOME OBSERVATIONS ON THE FEEDING OF CHILDREN¹

Some interesting notes upon the feeding of children are given below, which, although made in a children's hospital, can readily be applied to the home. The chief aim was to give the children good, nourishing food, no attempt being made to economize financially at the sacrifice of nutritive conditions, but the cost was not excessive. The children were being treated for diseases of the bone, due primarily to tubercular infection, but in every other respect they were leading the normal life of the average child, i.e., school in the morning and afternoon, and out-of-door play in much of their spare time.

¹ Compiled from "A Dietary Study in A Children's Hospital," by Mary S. Rose and Harriet C. Jacobson, Teachers College Bulletin, Ser. 3, No. 13.

SAMPLE MENU FOR ONE DAY

Breakfast	Dinner	Supper
Wheatena	Corned beef, potatoes	Scrambled eggs on toast
Bread and butter	Vegetable salad (beets, carrots, string beans)	Cookies
Cocoa	Apricots and prunes	Milk
	Milk	

In calculating the value of the foods furnished, due regard was given to the amount of the mineral constituents furnished as well as to the fuel value. Thus meat and fish cost one-fourth of the total outlay for food, and milk one-fifth, but their real value in the diet stood in the relation of four to five; thus milk is the most important as well as the cheapest food in this dietary. For the same reason grain products have a high score; an equal amount of fuel in the form of sugar would carry with it none of their valuable mineral constituents; the grains, vegetables, and fruits furnished half the total amount of iron.

During the cold months a cooked cereal was served six times during the week, rolled oats being given three out of the six mornings. Once a week a ready-to-eat cereal was served, the greater quantity of milk being used on these seeming to justify their use. During the summer these ready-to-eat cereals are used three times a week in place of the rolled oats. The children seemed never to tire of the cocoa and bread and butter for breakfast.

In calculating the cost in fuel values some interesting discoveries were made in regard to meats. It was found that ribs of beef were cheaper than rump at the same price, and cheaper than corned beef at two and one-half cents per pound less, and this led to the gradual elimination of so-called cheap cuts, except for the sake of variety. It was also found that 25 per cent more of round top steak was consumed than of Hamburg steak, so that the latter, which had been used frequently is now used only for the sake of variety.

Fruit was used liberally in all seasons, and fruit-milk sherbets were served frequently for dinner for the purpose of giving both the fruit and the milk. Milk was given the children freely, and if the customary amount was not drunk it was used in cooking, so that the children got it in one form or the other. More milk was used in summer than in winter, and once a week it was introduced in the shape of milk toast, and once in cream soup. Eggs were used twice a week, at least, for supper.

Realizing that children as a rule do not relish green vegetables, an attempt was made to familiarize them with new flavors by first introducing the vegetables in soups and gravies, and it was found that when once they had become familiar with the flavor it was not so difficult to get them to eat the vegetables alone.

An interesting fact was noticed in connection with the generally accepted belief that children crave sugar in large quantities. It was found that with the cereal slightly sweetened before serving, and the fruits cooked with a very moderate amount of sugar, though very few puddings and almost no cake were used, demands for extra sugar on the table were very rare. The children were allowed to make candy whenever they asked to do so, but strikingly few requests were made. It would seem then, that when children have adequate nourishment in other forms, and do not have temptation in the form of candy put immediately before them, the supposed craving for sugar is not in evidence.

Children respond readily to slight variations in form, color, and even in the number of dishes on the table, and it is perfectly possible to keep their menus simple and with the necessary elements in their proper forms and proportions and yet avoid any sense of monotony.

MAKING LIQUID FATS SOLID

The chemical relation between the solid fats, such as beef suet and mutton tallow, and the liquid fats, such as olive oil and the newer members of the group (cotton seed oil, corn oil, peanut oil, soy bean oil) has long been known to scientists. The difference in composition lies in a higher percentage of hydrogen in the solid than in the liquid fats; the carbon in the solid fats has all the hydrogen it can hold, while that in the liquid fats has not. The former are, therefore, spoken of as "saturated" and the latter as "unsaturated." This is an interesting fact, but it never had any practical importance until some one devised a means of making the liquid fats take up more hydrogen and become solid.¹ This greatly increased the uses to which they could be put in cooking. Some people have always preferred vegetable to animal fats, though it must be said that their preferences were purely personal matters and were not based on the result of scientific investigation. Now these people can have vegetable fats in solid as well as

¹ Pure Products, 9, 1913, no. 2, pp. 101, 102.

in liquid form, and even those who have no scruples about the use of animal fats have a much wider choice than formerly.

The process by which hydrogen is added to oils is known as catalysis. A catalyzer is a substance which has the power to effect unlimited changes in other substances without undergoing any permanent change itself. Hydrochloric acid, for example, may act as a catalyzer. A very little bit of this substance introduced into a hot solution of cane sugar will attack one particle after another and convert it into grape sugar and fruit sugar until all the cane sugar is gone. At the end of the operation the hydrochloric acid remains as it was in the beginning. In the case of the liquid fats the catalyzer is a very small amount of powdered nickel. After this is introduced, hydrogen is run through the fat and the nickel does the work of attaching it to one particle after another of liquid fat which finally changes to a solid fat. That the nickel can be entirely removed after its work is done is indicated by the fact that the chemist of the New Hampshire State Board of Health reports that he examined one of the commonest of these new solid fats, much advertised for culinary purposes, and found not a trace of the metal left.²

FIRELESS COOKER

A comparison has been made of gas range, fireless cooker and a combination of the two, as to amount of gas used, labor required, and the results as to appearance and palatability of the food cooked for family use for one day.

The saving of gas in using the fireless cooker after starting the food on the gas stove was from five-ninths to three-quarters of what it cost to cook the food entirely by gas, and the result was pronounced better in taste and appearance while the labor or attention required was greatly reduced. The combination gas stove and fireless cooker effected a still greater saving.

The saving in gas by use of the fireless cooker would amount in 93 days to the price of a fireless cooker, and in 231 days to the price of the combination range and cooker. For details see page 131.

²*Quart. Bul. Bd. Health N. H.*, 2, 1913, no. 2, pp. 31, 32.

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Fasting Studies, XII. The Ammonia, Phosphate, Chloride and Acid Excretion of a Fasting Man. XIII. The Output of Fecal Bacteria as Influenced by Fasting and by Low and High Protein Intake. N. R. Blatherwick, D. W. Wilson and P. B. Hawk, *Jour. Am. Chem. Soc.*, xxxvi, 1914, no. 1, pp. 137-152.

HYGIENE AND SANITATION

Our Modern Laundry. Allen L. Benson, *Good Housekeeping*, October, 1913, pp. 558-562.

Laundry Machinery and Methods. L. Ray Balderston. *Good Housekeeping*, October, 1913, pp. 562-568.

What Good Housing Means. John Ihlder, *Am. Journ. Pub. Health*, iv, 1914, no. 1, pp. 20-25.

Household Insects and Methods of Control. Glenn W. Herrick, *Cornell Reading Courses*, vol. 3, no. 49.

Infant Welfare Stations in N. Y. State. *Mo. Bul. N. Y. State Dept. Health*, December, 1913, N. Ser. 8, no. 12.

Further Reports (no. 5) on Flies as Carriers of Disease. *Repts. Local Govt. Bd.* [Gt. Britain] *Pub. Health and Med. Subjs.* N. Ser. no. 63, p. 22, fig. 2. (This includes three papers, namely: "Observations on the Range of Flies" by C. Gordon Hewitt; "British Flies Which Cause Myiasis in Man" by Ernest E. Austin; and "An Account of the Bionomics of the Flies *Faunia* [*Homalomyia*] *Canicularis*. [the lesser house fly] and *F. Scalasis*. Fab. [The Latrine Flies] and their relation to Myiasis of the Intestinal and Urinary Tracts" by C. Gordon Hewitt.)

The Municipal Regulation of Milk Supply. E. O. Jordon, *Jour. Am. Med. Assn.*, lxi, 1913, no. 26, pp. 2286-2290.

Cytology and Bacteriology of Condensed Milks. F. W. Andrewes, *Jour. Pathol. and Bacteriol.*, London, xvii, 1913, no. 2.

The Transportation of Food Products: A Pressing Health Problem. P. H. Bryce, *Am. Jour. Pub. Health*, iii, 1913, no. 10, pp. 1056-1062.

MISCELLANEOUS

A New Profession. S. P. Breckenridge, *Pub. Health Nurse Quart.*, vi, 1914, no. 1, pp. 25-30. (Social work.)

Modern Windows and Their Decoration. B. Russell Herts, *Craftsman*, xxv, 1914, no. 5, pp. 500-503.

"Pure Textile" Bills. *Textile World Rec.*, xlvi, 1914, no. 4, pp. 62-67.

Hints on Choosing Textiles. Bertha E. Titsworth, *Cornell Reading Courses, Lesson for the Farm Home*, ii, no. 45.

[Clothing in relation to] deaths of children by burning, *Jour. Am. Med. Assn.*, lxii, 1914, no. 1, p. 46. (Statistics are discussed which show that due to the different type of clothes more young girls are fatally burned than boys.)

A Canning Business for the Farm Home. Claribel Nye and Bessie E. Austin, *Cornell Reading Courses, Lesson for the Farm Home*, ii, no. 47.

Social Pediatrics. I. S. Wile, *N. Y. State Jour. Med.*, xlii, 1913, no. 11.

The Problem of the Institutional Infant. H. L. K. Shaw. *Am. Jour. Pub. Health*, iii, 1913, no. 3, pp. 1100-1103.

The Detection of Anthrax Spores in East India Wool and in Yarn Manufactured Therefrom. P. L. Southerland, *Jour. Hyg.* [Cambridge], xiii, 1914, no. 4, pp. 403-408.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS at the price listed.

Shelter and Clothing: A textbook in the Household Arts. By Helen Kinne and Anna Cooley of Teachers College, Columbia University. New York: The Macmillan Company, 1913, pp. 377. \$1.10. By mail of the Journal, \$1.20.

This book which is especially adapted for high schools fills a long felt need in putting before those interested in the practical education of girls, the first adequate text-book on the subject of Household Arts, a book, moreover, which handles the subject in its broadest aspect.

The book is divided into two parts, part one dealing with the home. Certainly no book could have a more charming introduction than the first chapter, which describes what the ideal home, or family life lived within the house, should be.

House planning, heating, ventilating and lighting are discussed in a practical and not too technical way, for it is evidently not the intention of the authors to give an exhaustive treatment of these subjects, but rather to merely open them up so that the students may see the relation to their own immediate surroundings.

The chapter on water supply and disposal of waste is concise and definite, and easily applicable to the systems in small towns.

The treatment of the decoration of the home and its furnishing is particularly fine, and will afford ideas to clever teachers for developing instruction along some particular line, and for correlating with other departments.

Part two has three sub-divisions—Textile Materials and How They Are Made, Sewing and Garment Making, and Dress. In dealing with the textile fibers and their manufacture, the usual technical and mechanical matter is presented in a way that can be clearly understood. Especially good is the comparison of the different fibers and the simple methods of distinguishing between them.

Under sewing there is a discussion of the relative merits of hand and machine sewing and the conditions under which some ready made underwear is produced.

Several chapters deal in a thorough and practical way with the hygiene and economics of clothing, and with its care, repair, and renovating.

In the chapters on millinery and the making of dresses some of the descriptions would have been clearer if the illustrations had been more adequate.

On the whole, the book is a store-house of excellent suggestions for the teacher as well as a most interesting text-book for the student and reference book for libraries. It contains, moreover, much material which would make it an unusually helpful handbook for the young home maker.

Textiles: A Handbook for the Student and Consumer. By Mary S. Woolman and Ellen B. McGowan. The Macmillan Company, 1913, pp. 427. \$1.80. By mail of the Journal \$1.92.

This book will receive a welcome from students of household arts throughout the field. Professor Woolman has put into this book the results of her twenty years experience in teaching textiles at Teachers College and she has been most ably assisted by Mrs. McGowan, an instructor at Teachers College, who has made a special study of textile chemistry. The result is a book which covers the textile field in its relation to the teaching of household arts more completely than any previous work.

After an opening chapter on the beginnings of the textile industry and chapters on spinning and weaving, the first half of the book is devoted to a study of the leading textile fibers, their cultivation, preparation, and methods of manufacture. These points are taken up in a thoroughly systematic manner; there are many illustrations and these, with the careful explanations of the mechanism of the complicated textile machinery will make it valuable to the teacher and student. At the close of each of the chapters on cotton, silk, wool and flax is a list of the standard materials, their prices and widths.

The latter half of the book treats the subject from a more comprehensive point of view and will prove a boon to the one who is endeavoring to teach textiles from a broader outlook. A chapter called Consumer's Judgment of Textiles dwells on the need for knowledge of values on the part of the consumer and gives hints helpful to every shopper. Three excellent chapters follow, dealing with the chemistry of textiles, the testing of different materials to determine the adulterations; the use of the microscope in judging the quality of the fibers; and a study of the principles of dyeing. The laundering of the different textiles is also discussed and a chapter on Hygiene of Clothing gives some important points on the relation of clothing to cleanliness and health. Some economic and social aspects and a chapter on Clothing Budgets complete the book and show how thoughtful of service the authors have been in considering the subject of woman as a textile consumer and in obtaining data from homes, stores and factories in order that some knowledge may be available on which to base needed conclusions and form definite standards.

Students of household arts who have had the privilege of studying with Mrs. Woolman will appreciate the organization of this valuable material, formerly gained through her lectures. The book may be used as a text book for college classes and will eventually help to place the teaching of textiles on a sound basis with other subjects in a college curriculum.

Old Italian Lace. By Eliza Ricci. London: Heinemann, 1913. Folio. Vols. I, pp. 434; II, pp. 284. Illustrated. 126 shillings. Rev. Illus. London News. [Amer. Ed.], 53, 1913, no. 1386, 824; Sup. pp. II, III.

The evolution of lace is due, the author says, to the fact that Italian ladies sometimes near the beginning of the sixteenth century took to wearing washable under-linen and had to have it suitably decorated.

The author insists that, unlike the older craft, embroidery, lace making did not come from the East but from Venice. The book is beautifully illustrated with reproductions of portraits, etc., showing lace.

According to the review referred to, "the first volume of Signora Ricci's work

deals with needle work lace. She shows it by several pleasantly written essays, and through a magnificent series of photographs from actual examples, taking its course from the first pale phantom which appears in a Gozzoli fresco, a mere bead-work between seams; becoming transparent in the drawn-thread work; richly interesting in the *reticello*, when the worker began to cut the linen away in definite spaces; and achieving its supreme note in *punto in aria* (stitch in air), the needle at last following superbly the pencil of Renaissance artists over ornament instinct with pagan grace and mediaeval romance. It is a gorgeous progression which the author invites amateur and connoisseur alike to witness. The second volume treats of bobbin-made lace in Italy; the provincial dialect, as it were, of the classic expression of the needlework lace. It may be seen in the best period of *punto in aria* Genoa and Milan rival Venice at this less personal but still beautiful art. And Hals and Rubens may be accounted its pictorial historians. . . . Nothing is more interesting in this Italian study than the glimpse of the French spirit which owed its chance to Colbert, Louis the Fourteenth's great minister. The fragile grace of Alençon breaking through the stately dignity of Venice is written in the curious and most elegant language of lace. 'Old Italian Lace' must certainly become 'acknowledged literature' of the art."

Cooking by G. A. S. Compiled by Miss Helen Edden. Edited by Mrs. M. A. Cloudesley Brereton. The British Commercial Gas Association [n. d.]. Pp. 126, figs. 20.

A large part of this book is devoted to recipes. The most original section, however, is that which concerns the choice of utensils for use for the gas stove and general directions for using this fuel. While the directions in general will have more point in places where gas is not so commonly used as in the United States, there are some suggestions which are novel even here and will be welcome. A number of sample menus are included.

The New Cookery. By Lenna F. Cooper. Battle Creek, Michigan: Good Health Publishing Company, 1913, pp. 9, 298, pls. 5, Price \$1.50. By mail of the Journal, \$1.60.

By "new cookery," the author means apparently the attempt to prepare, without the use of flesh foods, appetizing dishes which lead to a moderate as well as a low proteid diet. Milk, cheese (Neufchatel or similar type), and eggs are included in the food materials called for by the recipes, as well as commercial articles designed by the manufacturer as meat substitutes or as seasoning, etc.

From the introduction it would seem that the author shares the belief sometimes stated that chronic diseases are due to a faulty diet and by implication to the use of a high proteid diet, particularly one containing flesh foods, or that such diseases are curable by diet. References are also made to certain other dietary theories and conclusions as if they were definitely established facts. The author has realized, as is too seldom the case in works on lacto-vegetarian and related cookery, that savoriness is an important part of food preparation, and the result is a collection of recipes (and recipes make up the bulk of the volume) in which this matter has received special consideration. Dependence is placed on onions, celery, and other seasoning vegetables, on fruits and fruit juices, lemon juice, sugar, and some specially manufactured products for seasoning, spice being mentioned in only a few of the

recipes, and no use being made of such common seasonings as pepper, paprika, sweet green peppers, or pimientos.

In the section on meat substitutes and entrées, special reliance is placed on commercial preparations designed as meat substitutes, on nuts, and on dried legumes, and very few of the many possible savory dishes which contain milk, eggs, Neuf-châtel cheese, etc., as their principal protein constituent are included.

A peculiarity of the recipes is the use of definite amounts of concentrated hydrochloric acid and soda in place of an equivalent amount of baking powder. Concentrated hydrochloric acid being a chemical used in the laboratory with caution, it would seem the part of wisdom to keep it out of the kitchen or, if hydrochloric acid is recommended at all, to use a dilute form.

Besides the recipes, the volume contains brief discussions of cookery, cooking processes, fire and ranges, and similar topics, and a collection of menus for breakfast, dinner, supper, and luncheon, and for special occasions. The menus contain no flesh foods and are described as "balanced," the term apparently implying made up in such a way that low proteid foods predominate in the day's ration. Though it would not be possible to calculate this from the data in the book, it may be that it is also the author's belief that the energy value of the menu would be such that the ratio of protein energy to the energy of the rest of the diet would be in accord with some dietary standard, and so "balanced," for it is of course to such a ratio that the term "balanced" should be applied technically.

The book is well written and well edited, and has illustrations which are a help in suggestions as to pleasing service besides adding to the attractiveness of the volume.

Raisins, Figs, and Other Dried Fruits and Their use. By C. F. Langworthy, U. S. Dept. Agr. Yearbook 1912, pp. 505-522.

Information is summarized regarding the preparation and use of dried and evaporated fruits, including apples, pears, prunes, peaches, apricots, cherries, raisins, figs, citron, dates, and others; the food value of dried fruits; ways of using them; and similar topics. The great importance of the American dried fruit industry is spoken of.

The bulletin points out that whether used by themselves as substitutes for fresh or preserved fruits, or mixed into cakes, puddings, confectionery, and other dishes, dried fruits offer a wholesome, nutritious, and economical way of securing variety in the diet, and are especially useful where the supply of fresh fruits is limited, or where storage space for fresh fruits is lacking.

The Nature of Tea Infusions. By H. L. Smith. *Lancet* London, 1913, I, no. 12, pp. 844, 846.

This article reports and discusses data regarding the combination of the caffeine and tannin in tea infusions.

"In the hot tea infusion it may be concluded that caffeine and tannin occur considerably hydrolyzed and in the free state."

Experimental methods are described.

Book of Recipes for the Domestic Science Department of the Altoona High School. By Zitella Wertz. Altoona, Pa.: 1913, pp. 85.

A collection of recipes with blank pages for notes.

Suggestions for Diet Kitchen Equipment. By S. Wierzbicki. U. S. Naval Med. Bul., 4, 1910, No. 2, pp. 161-163, dgms. 2.

A kitchen from which regular meals are to be distributed and in which light food can be prepared for patients and cooking done by a nurse for patients requiring nourishment between regular meal hours must serve "as a central distributing station for food brought from the main kitchen; as a place where food can be prepared for patients requiring nourishment between meal times; where staple articles for preparation of light diets are kept; and where ice is on hand for ward uses."

The author describes in detail the equipment which has been planned to meet these requirements for the men's infirmary diet kitchen at the United States Naval Hospital at Las Animas, Colo., which includes an electric kitchen cabinet, steam table, ice box, and food trucks with trays.

A ground plan is provided of the diet kitchen which shows what the author considers the most convenient arrangement of the stationary kitchen equipment. Various special devices are described.

Concerning Heat Conductivity of Floors of Different Kinds. By F. Eichbauer. Gsndhts. Ingen., 35, 1912, No. 48. Abs. in Hyg. Rundschau, 23, 1913, No. 20, pp. 1276, 1277.

When an animal body touches the floor, heat is lost by conduction. Since the contact is usually brief, the amount of heat given off depends less on the conductivity of the whole floor material than on that of the upper layers. It is only when the contact is prolonged that the nature of the lower layers comes into question.

The amount of heat carried away by the floor depends on the smoothness of the floor surface and on the material of which it is made. A rough floor has less conductivity than a smooth one, which explains the agreeable effect of cocoa matting on stone floors.

In order to compare various materials, a smooth cement floor was chosen as standard and its conductivity rated as 1. The higher the figure in the comparison, the lower the conductivity of the floor in question. The following values were found for the more important materials: Asphalt, 0.65; "terrazzo," 0.79; earth floor, 1.18; "dörrit," 2.01; linoleum on cement, 1.19 to 1.44; cork tiling, 2.15 to 2.39; parquet, 2.60 to 2.83.

Exhibiting, Classifying and Judging Homemade Horticultural Products.

By J. B. S. Norton. Hyattsville, Md: 1913, pp. 32. \$0.25. 5 copies, \$1.

This study by Professor Norton, of the Maryland Agricultural College, of exhibits of homemade fruit products, is perhaps the most important contribution so far made to the problem of the use of score cards in Home Economics. Professor Norton has had several years' experience as a judge in handling such exhibits and he has been at pains to collect the experience of the various horticultural societies, colleges and other organizations which organize exhibits. His pamphlet discusses the preparation of an exhibit, methods of display, management, a classification of fruit products in some twenty groups with definitions, exhibitor's rules, judge's rules, scoring and score cards, educational features, and suggestions as to the preparation of fruit products.

Influence of Vegetables Greened with Copper Salts on the Nutrition and Health of Man. By Ira Remsen et al. U S. Dept Agr. Rpt. 97, pp. 461.

This report of the Referee Board of Consulting Scientific Experts presents in detail and discusses the experimental data obtained in the four series of investigations, namely "Action of Coppered Vegetables on the Health and Nutrition of Man," A. E. Taylor; Pp. 9-208.; "Investigations of the Effects of Foods Containing Copper Compounds on the General Health and Metabolism of Man, J. H. Long; Pp. 209-430; "Absorption and Distribution of Copper when Coppered Vegetables are Eaten," R. H. Chittenden, Pp. 431-448; and "Histological Examination of the Tissues of Dogs and Monkeys," T. Smith, pp. 449-461. From a study of these four reports the Referee Board reached the following conclusion:

"Copper salts used in the coloring of vegetables as in commercial practice can not be said to reduce, or lower, or injuriously affect the quality or strength of such vegetables, as far as the food value is concerned.

"Copper salts used in the greening of vegetables may have the effect of concealing inferiority, inasmuch as the bright green color imparted to the vegetables simulates a state of freshness they may not have possessed before treatment.

"In attempting to define a large quantity of copper, regard must be had to the maximum amount of greened vegetables which might be consumed daily. A daily dose of 100 grams of coppered peas or beans, which are the most highly colored vegetables in the market, would not ordinarily contain more than 100 to 150 milligrams of copper. Such a bulk of greened vegetables is so large, however, that it would hardly be chosen as a part of a diet for many days in succession. Any amount of copper above 150 milligrams daily may therefore be considered excessive in practice. A small quantity is that amount which, in the ordinary use of vegetables, may be consumed over longer periods. From this point of view, 10 to 12 milligrams of copper may be regarded as the upper limit of a small quantity.

"It appears from our investigations that in certain directions even such small quantities of copper may have a deleterious action and must be considered injurious to health."

How I Kept my Baby Well. By Anna G. Noyes. Baltimore: Warwick and York Pp. 193. \$1.25. By mail of the Journal, \$1.30.

Mrs. Noyes' little book gives to the public a good working plan for keeping an exhaustive record of a baby's life for its first two years.

There is much to be commended in this effort to show young mothers how much may be accomplished by jotting down a part of what every careful mother notices and too often forgets when the knowledge of it would be useful. Mrs. Noyes' methods were her own but she worked under the advice of her physician. This fact is frequently noted and yet it might have been well had she more distinctly warned the young mother attempting to copy her methods that she must not substitute her own conclusions and treatment for skilled advice. It is rarely safe to assume that any symptom comes from a probable cause unless possible causes have been eliminated by examination.

The record-keeping although it may seem to some unnecessarily detailed, is very careful and the book is both interesting and valuable.

Nerve Waste. By George VanNess Dearborn, M.D. Boston: Health Education League, 1913, pp. 29. Price 7 cents, \$4.50 per 100.

Health of the School Child. By Robert W. Hastings, M.D. 1913, pp. 24. Price 6 cents, \$3.75 per 100.

These two pamphlets are the most recent of the Health-Education series.

In "Nerve-Waste" the plan is to present the credit and debit sides of our nerve-force. The value of sleep, adequate nourishment, and suitable work is shown on the one side and the effect of worry, disorder, monotony, and over-stimulation, on the other.

"Health of School Children" was written to call attention to, and offer suggestions for the prevention of, the many handicaps, in the way of physical ills, with which most school children have to contend.

Common Diseases. By Woods Hutchinson, A.M., M.D. Boston and New York: Houghton Mifflin Company. The Riverside Press Cambridge, 1913. \$1.50. By mail of the Journal, \$1.62.

Dr. Woods Hutchinson interests, entertains, and instructs regarding many of the common diseases which are and some which are not. He always writes with frankness, with humor and with joyous versatility. At times in the desire to be pleasant, to give encouragement, or to inject hope, statements occur which are not directly in accord with the accurate records of fact. It is scarcely true, for example, to suggest that the person with adipose tissues in middle life has at least "a ten to twenty per cent greater chance of survival to a good old age than the thin, spare and nervous one." In considering the liver, he has assumed much that is unproven and building upon this has built up a large field of hepatic influence which makes good reading regardless of its scientific basis.

The topics covered represent many of the contributions which have appeared in journals but the compilation is most excellent and includes, among others, Dyspepsia, Catarrh, our National Nasal Luxury, Asthma and Hay Fever, The Unwisdom of Worry, Insomnia and Insomniacs, Imaginary Diseases and their Inventors, and The Prevention of Old Age.

The current of good nature that pervades his writings carries the reader along so that he may view with equanimity the verbal scenes the writer offers. Shams are attacked, charlatans are opposed and insanity and inanity are thundered against. It is unfortunate that so powerful a writer, one who stands out in the public eye as a speaker, a lecturer, and an author should at times appear to sacrifice accuracy for effect or give the impression of seeking to gratify lay whims at any cost. This is particularly regrettable because his volumes are popular among those whose familiarity with the essential underlying facts must necessarily be limited. If the literal values were as great as the literary values, criticism save of an appreciative nature would be almost impossible.

Country Life Conveniences and Enjoyments. Edited by H. M. Skinner and A. L. McCredie. Library of Agriculture, Chicago, 1912, vol. 8, pp. 502, figs. 61.

This book is made up chiefly of reprints of farmers' bulletins of the United States Department of Agriculture.

BOOKS RECEIVED

- Practical Dietetics.** By Alida Frances Pattee. Mt. Vernon, N. Y.: A. F. Pattee. \$1.50. With Handbag Diet Book, \$1.75.
- Food and Household Management.** By Helen Kinne and Anna M. Cooley. New York: Macmillan and Company. \$1.10. By mail of the Journal, \$1.22.
- Simple Garments for Children.** By M. B. Synge. New York: Longmans, Green and Company. Patterns 10, \$1.25. By mail of the Journal, \$1.30.
- How to Cook in Casserole Dishes.** By Marion H. Neil. Philadelphia: David McKay. \$1.00. By mail of the Journal, \$1.10.
- Markets for the People.** By J. W. Sullivan. New York: Macmillan and Company. \$1.25. By mail of the Journal, \$1.35.
- A Self-Supporting Home.** By Kate V. St. Maur. New York: Macmillan and Company \$0.50. By mail of the Journal, \$0.58.
- Low Cost American Homes.** By Fred T. Hodgson. Chicago: Drake and Company. \$1.00. By mail of the Journal, \$1.10.
- The Cost of Living.** American Academy of Political and Social Science. Philadelphia, 1913. Paper, \$1.00 Cloth, \$1.50. By mail of the Journal, \$1.10 or \$1.60.
- Modern Cities.** By Horatio Pollock and William Morgan. New York: Funk and Wagnalls Company. \$1.50. By mail of the Journal, \$1.62.
- Sanitation Water Supply and Sewage.** By William Paul Gerhard. New York: Van Nostrand Company. \$2.00. By mail of the Journal, \$2.15.
- Disposal of Household Waste.** By William Paul Gerhard. New York: Van Nostrand Company. \$0.50. By mail of the Journal, \$0.54.
- Flies and Mosquitoes.** By William Paul Gerhard. New York: Van Nostrand Company. \$0.25. By mail of the Journal, \$0.27.
- Rearing an Imperial Race.** By Charles E. Hecht. London: The St. Catherine Press. 7s. 6d.
- Young Working Girls.** By Robert A. Woods and Albert J. Kennedy. Boston: Houghton Mifflin Company. \$1.00. By mail of the Journal, \$1.08.
- Vocations for Girls.** By E. W. Weaver. New York: The A. S. Barnes Company. \$0.75. By mail of the Journal, \$0.80.
- The Vocation of Woman.** By Archibald Colquhoun. New York: Macmillan and Company. \$1.50. By mail of the Journal, \$1.60.
- A Survey of the Woman Problem.** By Rosa Mayreder. New York: George H. Doran Company. \$1.50. By mail of the Journal, \$1.62.
- Financing the Wage-Earner's Family.** By Scott Nearing. New York: B. W. Huebsch. \$1.25. By mail of the Journal, \$1.30.
- Medical Inspection of Schools.** By Luther H. Gulick, M.D., and Leonard P. Ayres, Ph.D. New York: The Survey Associates. \$1.50. By mail of the Journal, \$1.62.
- Social Work in Hospitals.** By Ida M. Carmon. New York: The Survey Associates. \$1.50. By mail of the Journal, \$1.58.

NEWS FROM THE FIELD

The annual meeting and luncheon of the Home Economics Association of Greater New York was held January 24, 1914. Only about fifty were in attendance as the weather was most unfavorable.

Greater New York Home Economics Association The speeches were short and very informal. Mrs. Walter L. Hervey spoke on "The Training of Girls in Norway." Mrs. Hervey's visits to typical Norwegian homes made her talk full of close personal touch. She commended most strongly the close companionship of mother and daughter and the helpful spirit of the Norwegian mother toward the teacher of Home Economics in the schools.

Miss Laura Drake Gill outlined briefly the educational ideals and policies upon which she is organizing the Home Economics work in the University of the South. The happy combination of college education and general preparation for a vocation will be most pleasing to those interested in the Home Economics field.

Miss Isabel Ely Lord spoke briefly emphasizing the need for devising schemes for raising money for the Ellen H. Richards Fund.

The results of the annual election of officers were as follows: President, Miss Cora M. Winchell; First Vice-President, Miss Meriel Willard; Second Vice-President, Dr. B. R. Andrews; Secretary-Treasurer, Miss Florence E. Winchell, 176 Elm Avenue, Mount Vernon, New York; Executive Committee, Mr. Bailey Burritt; Nominating Committee, Miss Ruth Atwater, Miss Emilie C. Pratt, Miss Ikelheimer, Miss Kalbfleisch, and Miss Jane Fales.

A general meeting of the Association was held January 31, in the High School of Practical Arts, Roxbury, Massachusetts.

After the business meeting the subject, "How the School Meets the Needs of the Home," was discussed by Mrs. Ripley, Assistant Superintendent Boston Public Schools; Miss McCombs, Public Schools, Springfield, Mass.; Miss Comstock, Professor of Home Economics, Amherst Agricultural College; and Mr. Weaver, Principal Practical Arts High School, Roxbury. Several other speakers described the work of continuation, part-time and trade schools. The building was open for inspection from 10 a.m. to 3 p.m. Luncheon was served by the pupils, after which there was a general discussion. Secretary, Lillie C. Smith, Brookline High School, Brookline, Mass.

A meeting of the Executive Board of the Michigan Home Economics Association was held at the Michigan Agricultural College, East Lansing, on the afternoon of November 22, to discuss the matter of the program and

Michigan Home the place of the next annual meeting.

Economics

Association The following tentative program was decided upon: "Women as Wage-Earners," Dr. Sophonisba P. Breckenridge, of the Chicago University; "The Training of Hospital Dietitians," Dr. Reuben Peterson, Head of the Medical Department of the University of Michigan; "Report of the Work in Home Economics by the Michigan Federation of Women's Clubs," Mrs. McIntosh, Chairman; and "Outline of a Course in House Decoration as Worked Out at the Michigan Agricultural College," Mrs. L. D. Peppard, of Michigan Agricultural College. Miss Lauretta Morrissey was appointed chairman of a committee to make a survey of domestic science taught in the high schools of Michigan, to be given at the annual meeting in May. The Secretary was instructed to invite Miss Zoa Wimple, State Inspector of Foods, Washington, a former student at the Michigan Agricultural College and a graduate of the Household Arts Department of the Michigan State Normal College, to send an outline of the work covered by her office with suggestions for some organized work in Michigan.

The place of the annual meeting was not definitely decided upon, but the feeling of the Executive Board was that the invitation of Detroit should be accepted and that there should be three sessions, beginning Friday evening and closing Saturday afternoon.

Another meeting of the executive committee of the Michigan Home Economics Association was held in Ypsilanti, early in March. The committee was invited to visit the Household Arts Department of the Normal College, especially the class preparing the daily luncheon for one hundred pupils of the Training School, and the class in invalid cookery serving the food to the sick students in charge of the college nurse in Health Cottage, a new infirmary on the campus. The latter class has made a week's menu for the Ypsilanti Anti-tuberculosis Association which the association has had printed and copyrighted for sale at five cents a copy to those interested in the feeding of tubercular patients. Secretary, Mrs. M.^h French, Ypsilanti, Mich.

The annual meeting of the Iowa Home Economics Association was held in Des Moines, November 6 and 7, 1913.

Iowa Home The first session was on Thursday afternoon in the Y. W.
Economics C. A. building, with Miss Knowles presiding.

Association The program was carried out as planned. Most interesting as well as helpful addresses were given by Miss Schermerhorn, Iowa State College; Prof. Ruth Wardell, Iowa University; and Mrs. E. B. Wilson of Jefferson.

Following the last address an opportunity was given to view the beautiful collection of pictures that was presented by Mrs. Wilson.

A reception was then given to the members and friends, by the Home Economics teachers of Des Moines. This was much enjoyed by every one present.

The program Friday morning included some excellent addresses. All were glad to hear Mr. Mahannah, State Inspector of Home Economics in High Schools,

talk on "Home Economics in Relation to Normal Training in High Schools." Miss Grimsby of the Municipal Courts of Chicago gave a most interesting talk on "Some City Problems which Home Economics Should Help to Solve."

Following this a very helpful question box was conducted by Miss Young of Cedar Falls and Miss Tidd of Des Moines.

At the close of the program the annual business meeting was held, at which the following officers were elected for the coming year: President, Miss Katherine McKay, I. S. C., Ames, Iowa; Vice-President, Miss Alice Heinz, Waterloo, Iowa; Secretary and Treasurer, Mrs. Marian Barr, Des Moines, Iowa; Representative Councilor, Miss Ruth Wardell, S. U. I., Iowa City, Iowa.

The Home Economics Club has held regular monthly meetings during the year and has been making a study of local conditions—Michigan child labor laws, the new housing code and clean food. Richards Day was observed with an informal program and the club voted to contribute ten dollars to the Memorial Fund.

Grand Rapids Home Economics Club The club members are largely professional people, therefore it is their plan to concern themselves with subjects of vital interest to the homemakers. They are affiliated with the larger women's clubs of the city who are willing to continue any work outlined by the Home Economics Club, such as city inspection of milk and meat and the clean food campaign. Secretary, Mrs. Elizabeth Slaght, 5 Mt. Vernon Avenue, Grand Rapids, Mich.

The Indiana Home Economics Association held their annual convention in January at Purdue University, Lafayette, Ind. The convention was largely and enthusiastically attended by about 400 women. The line of work adopted for the current year is "modernizing the farm home." Special effort is to be made to form "Door-Yard and Garden Clubs" among boys and girls. The association asks the help of both men and women who are interested in the movement for better living and happier homes. The officers are glad to answer letters, suggest plans for local organization, and furnish a list of useful bulletins. Secretary, Mrs. Lewis Taylor, Newburgh, Ind.

The annual meeting of the Ohio Association was held in Townsend Hall, Ohio State University, February 12-14.

Ohio Home Economics Association The program included school visiting, and discussions of vocational work, domestic art, domestic science, household bacteriology and similar subjects, in regard to their proper presentation in class.

The committee in charge felt gratified in securing as speakers, wide-awake workers who brought much that was helpful from their own experiences.

In arranging the topics, the association anticipated the time in the near future when a uniform course of study in Home Economics will be adopted for Ohio. Secretary, Lana Bishop, Technical High School, Cleveland, Ohio.

DEPARTMENT

OF

HOUSEHOLD SCIENCE

The Home Economics Association of Connecticut held its regular business meetings as usual in May and October of the past year. There was a good attendance at both of these meetings which were most interesting and helpful. A great increase in membership is shown. Secretary, Leda G. Prindle, 5 Adelaide Street, Hartford, Conn.

The Household Arts Club of the University of Nebraska hold a meeting once each month at which time topics of interest are selected for the program. The December meeting consisted of a memorial program for Mrs. Ellen H. Richards and at the January meeting letters were read from most of the former members of the club.

During the week of Organized Agriculture in January the Home Economics Department of the University offered short courses in Domestic Science and in Domestic Art in the forenoons and in the afternoons the Home Economics Association of the state held its meetings. Interesting talks were given on the Better Babies Movement, Pure Food Laws of the State, and Boys and Girls Club Work in Nebraska. During these meetings an effort was made to increase the collection of heirlooms and curios for the Department of Home Economics.

The Department of Home Economics at Cornell University conducted a Home-makers' Conference during Farmers' Week, February 9 to 14. For several years a large number of women have been at Cornell during Farmers' Week. Lectures and demonstrations have been presented on the subjects of foods, sanitation, household art, and household management. This year lectures were given by members of the department staff, and by outside lecturers from the Department of Agriculture, from Simmons College and elsewhere. Throughout the week there were exhibitions of work done by the regular students of the department. An extension school was conducted during five days of the week for residents outside of Ithaca who wished to take courses in food preparation. The food laboratories in the Home Economics Building were used for this purpose.

Organizations especially interested in Home Economics made the Home Economics Building their headquarters during Farmers' Week. Opportunity was given for meetings of different organizations having under consideration domestic science or subjects pertaining to home life.

The lecturers for the Home Economics Week, February 9 to 13, at the University of Texas were representatives from the National Consumers League, Medical School, University of Illinois, Columbia University, and the faculty of the University of Texas.

The week was given up to exhibits, lectures and demonstrations dealing with social problems such as recreation, working hours of women and children, the high cost of living, wages and morality, modern dress, hygiene, community sanitation; school problems in regard to the school luncheon and the teaching of various branches of Home Economics; and home problems such as marketing, the serving of food, the family table, labor-saving devices, and house decoration.

The educational exhibit illustrating the various phases of Home Economics was open to the public each day throughout the week in the Domestic Economy Building. The faculty of the department were at home in the building every afternoon from four to six to meet the Home Economics visitors, and to explain fully the nature of the exhibits.

The seventh annual meeting of the Missouri Home Makers' Conference, which met at Columbia, January 13-16, was one of unusual interest. Reports were given from the Farm Congresses at Tulsa and Ghent, and from **Home Makers' contests and clubs all over the state. Other features were:**
Conference babies' health contest and exhibits of farm and home products, judging being done in each case by score cards; demonstrations by boys' and girls' clubs; and marching, games and dances by the children of the University Elementary School.

Home topics were discussed, such as "Courtesies in the Home," "Influence of Good Music and Pictures in the Home," "Training of Children," and "The Relation of the Home to the School."

There were also special meetings for those interested in poultry raising and dairying. One session was held in conjunction with the Rural Life Conference.

The first Institute for Teachers of Home Science was held at the Industrial Institute and College, Columbus, Mississippi, in February, 1913. This was so well attended and resulted in such renewed enthusiasm, both **Home Science** for the visiting teachers and for those at the college, that it
Institute was decided to make this Institute a permanent feature of the school year.

In the February Institute for 1914 the general object of the meetings was a discussion of what a well defined course in Home Science should embrace. The planning and decoration of the home was studied and concrete illustrations given at the new practice home, "Kanahoah."

The industries of the home, such as cooking, sewing and gardening, were discussed in lectures and round tables.

Men and women prominent in the work gave us their ideas of the educational significance of the Home Economics movement.

All teachers of Home Science in Mississippi were invited to be present. Arrangements were made for their accommodation in the College Dormitory.

Omicron Nu, the senior honorary society, for the promotion of Home Economics of the New York State Normal College at Albany, New York, had the exercises in charge for the observance of Home Economics Day in this city.
Richards Day The society was especially fortunate in having Miss Anna M.
at Albany Cooley of Teachers College, Columbia University, as the chief speaker on the program. Her subject was "Personal Recollections of Mrs. Ellen H. Richards," a theme which she was peculiarly fitted to present to us on account of her intimate associations with Mrs. Richards.

Besides several musical numbers a short talk on the origin of Home Economics was given by the President of Omicron Nu. An informal tea and reception followed the program, and those present had the opportunity of personally meeting Miss Cooley, as well as many leaders of the Home Economics movement in the Albany schools. Secretary, Abby C. Franklin.

A class of twelve students at Mills College, Cal., made and boxed thirty-five pounds of candy December 2 and sold it December 3, after a short meeting to commemorate the day. The total receipts, \$11.65, were added to **Richards Day** at the Richards Memorial Fund. At present, students numbering **Mills College** seventy are registered in classes in the Home Economics Department, and about half as many more are taking the chemistry which is a prerequisite to cooking. This is a 9 per cent increase over the registration of a year ago and the outlook is encouraging.

Five open lectures on school feeding were given at Teachers College, Columbia University, during February and March by Miss Alice C. Boughton, Superintendent of the Philadelphia Elementary School Lunches. The **Teachers College Lectures** lectures covered the details of organization and management of meals, and the educational advantages of school feeding, as well as the professional opportunities which it offers.

All interested were invited to attend, and a brief discussion followed each lecture.

Several bills are before Congress regarding "fraud in commodities in interstate commerce." Hearings are being held and the evidence published. All persons **Fraud in** who are interested in the economics of purchasing should secure copies of the hearings through their congressman, or through **Commodities** Hon. Francis Lindquist, U. S. House of Representatives, who is the author of one of the bills. Textiles, shoes, and watches have already been the subjects of inquiry.

Four hundred men and women of national prominence shared in the sessions of the National Conference on Race Betterment held in Battle Creek, January 8-12.

The National Conference on Race Betterment Broadly divided, the considerations of the conference were eugenics and euthenics. The latter word, aptly coined by Mrs. Ellen H. Richards was heard as frequently in the conference deliberations as that newer definition of the science of being well born—eugenics.

No attempt was made at this conference to formulate a eugenic or euthenic creed, but the various addresses go to show that the mass judgment of the conference is that in addition to being eugenically born, the individual, to attain physical and mental perfection and his completest usefulness, must also be euthenically reared. Simple, every-day matters of diet, household cleanliness and other phases of domestic economics were discussed by the conference.

An interesting address was delivered by Mrs. Melvil Dewey, of the American Home Economics Association. Among other things, Mrs. Dewey said: "Euthenics is the name proposed by Mrs. Ellen H. Richards for the preliminary science on which eugenics must be based; it seeks to emphasize the immediate duty of man to better his conditions by availing himself of knowledge already at hand which shall tend to increase health and happiness. He must apply this knowledge under conditions which he can either create or modify. Euthenics is to be developed through sanitary science, through education, and through relating science and education to life.

"Mrs. Richards strongly urged the education of all women in the principles of sanitary science, as the key to race progress in the twentieth century. Sanitary science, above all others, when applied, benefits the whole people, and raises the level of productive life. As long ago as 1892 the president of the British Medical Association said: 'The whole future progress of sanitary movement rests, for its permanent and executive support, upon the women of our land.' . . .

"However far the science of eugenics may carry the race towards perfection, unless its sister science, eugenics, goes hand in hand, the race will again deteriorate as surely as it has in the past. Accepting them together, as guiding principles in the evolution of life, man may yet build for himself a temple worthy of an unconquerable soul."

Concerning this Conference we quote in addition from an editorial in the *Journal of the American Medical Association* of January 17.

"The purpose of the Battle Creek Conference, as officially stated, was 'to assemble evidence as to the extent to which degenerative tendencies are actively at work in America and to promote agencies for race betterment.' Under the first head were papers on apparent increase in degenerative diseases, the causes of the declining birth-rate, crime, deterioration of civilized women, factory degeneration, alcohol and tobacco, social evil, and delinquent and defective children. On the constructive side were discussions on eugenics in many of its phases. The program impressed one as being overloaded on the degenerative side—possibly because of an overemphasis of the subject at the present time—and as too much given over to a discussion of the past and present conditions rather than of constructive plans for the future. The general effect left on the mind of the listener was that the many papers and addresses, most of them excellent in themselves, were not correlated and were written often from conflicting, if not contradictory points of view, while many of those in attendance impressed the careful observer as being earnest rather than informed, and zealous rather than discriminating. The impressive, undeniable fact, however, is that they were there. It is possible today for the first time in the history of civilization to call and to hold a conference to discuss, not time-worn dogmas or even present-day needs, but future possibilities. From this point of view, such conferences must command the careful attention of the student of social development.

"Whatever one may think of the individual views expressed, or of the immediate, concrete results of such gatherings, the fact is in itself significant that such a conference, extending over five days and attended by thousands of people, is possible. Never before in the history of civilization have there been so many men and women who were earnestly, sincerely and unselfishly laboring for the general good. One may criticize their reasoning, dissect their statistics or draw from their premises entirely different conclusions, but the important fact remains that such conferences, which are becoming increasingly frequent, would have been impossible and practically inconceivable a generation ago. The pessimist and the critic see in such gatherings only another symptom of universal unrest and discontent. The optimist sees in them faintly foreshadowed the dawning of the age of which Tennyson sang, when each man's good shall be all men's aim.

The Third Vocational Conference on Opportunities for Women in Occupations other than teaching was held under the auspices of the women students of the University of Wisconsin at Madison, Wis., February 11, 12, 13.

Vocational Conference Prominent professional women addressed the Conference on their respective occupations, and gave an insight into professional life.

According to Miss Helen Bennett, Manager of Chicago Bureau of Occupations, "Every college woman today has to choose a profession. First, she finds it a financial necessity; second, she wants to preserve her self-respect and intellectual interest; and third, she wants to develop herself by doing something with her valuable education.

"In choosing a profession, she must take stock of her capabilities and be honest with herself. Her college education is merely a foundation upon which she needs to build up her profession. A psychological attitude of interest, enthusiasm, and perseverance are her greatest aid in winning out in her profession."

The Chicago Bureau of Occupations for Women is working for the economic development of women's occupations. It investigates various lines of work and offers vocational guidance in placing women in professions at a commission of 3 per cent of the first year's salary, with a registration fee of one dollar.

Mrs. Annette McCrae, the first landscape architect of America, attributed attainment of success in any profession to determination, concentration, and a spirit of "never let go."

Noted representatives from the various fields occupied by women gave their opinions and suggestions. Some of the recommendations are noted here for the consideration of enterprising women.

Opportunities in secretarial work are many, such as business, visiting, social, and private secretary. The training for secretarial work ought to consist of a college education, travel, business experience, and self-training in conscientious effort and alert observation. The more technical training should include stenography, typewriting, double entry bookkeeping, card cataloging and filing. Secretaries receive salaries varying from \$1000 to \$5000 a year.

The state offers a wide opportunity in civil service, in positions calling for clerks and clerical assistants, investigators, and managers of institutions. In the cities, positions are offered for sanitary inspectors, truant officers, playground directors, librarians, and social workers.

These positions demand technical training in various lines, such as physical culture, sociology, civics, philanthropy, or institutional management. A year of practical experience as investigator, clerk, or social worker is usually required. The salaries vary from \$600 to \$2000 per year.

The kinds of federal positions offered are those for institutional managers, matrons and nurses in state hospitals and asylums; teachers in state schools and reformatories; investigators and field workers; inspectors of state institutions, factories, and labor conditions; and organizers of welfare work. A college education with special study of sociology, economics, and political science, supplemented with earnest endeavor in practical experience is necessary for social service. Salaries vary from \$900 to \$1800, the most common being about \$1200.

Nursing is one of the many professions in which women undoubtedly excel men. A nurse must have a wide breadth of sympathy; she must be strong, physically

and mentally; she must be patient, tactful, tolerant, and kind, and should have a thorough educational foundation. The salaries of nurses, especially those having a college education, are good, and depend greatly on the kind of work done.

Opportunities are offered in public health nursing, in social service and welfare work, and in secretarial work as well as in private and hospital nursing.

Our cities need good housekeeping as well as do our homes. Excessive smoke, filth, unsanitary food supplies, and improper sewage disposal are conditions in the cities which increase the death rate and lower human efficiency. Such conditions need the supervision and care of the municipal housekeeper.

The position of farm expert is a comparatively new one among the many positions capably filled by women. North Dakota, in its progressive steps toward rural improvement, has appointed to this position Miss Mil-dred Veitch, a university woman and a farmer. Her work will be especially directed toward the farm home into which she will seek to introduce the best labor-saving devices. She will also give advice in home management and try to bring about among the farm women such an attitude toward their work that drudgery will be eliminated and the women will find time to meet together for helpful discussion.

Ten boys at Sparks, Md., are hoping and working for the realization of the Oread School of Country Life. They credit Mr. B. H. Crockeron with the plan for a school to teach boys how to make a good living on the land, and to instill into them a love for the country so that they will go back to their respective neighborhoods inspired to "plow, preach or teach the doctrine of their school—a better country life."

Mr. B. H. Cocherson, who is now professor of extension work in the University of California, inspired the boys beside their frequent camp-fires when he was in Sparks where the community was practically reconstructed by his ability to solve or transform any problem that presented itself. Mr. Crocheron has promised to return and head the school as soon as the boys get the funds. The boys are progressing rapidly, both in amounts collected and sympathy gained. They have the coöperation of many noted men, such as Mr. Joseph Wing, rural expert; Dr. W. A. Spillman, U. S. Department of Agriculture; Mr. Gifford Pinchot, former chief forester; and prominent business men of Baltimore.

A board of regents has been appointed to advise on the questions which arise and it is proposed that the school become a National School of Country Life.

A most important gathering in the interest of the annihilation of commercialized vice and the promotion of social and personal purity was the Seventh International Purity Congress. It was held last November in Minneapolis, Minn., under the direction of the World's Purity Federation, with the coöperation of government officials and eminent reformers and philanthropists. This federation and its former international gatherings have done much to bring about the present agitation against the social evil and to create an intelligence which makes possible a sane discussion of such problems.

The *New York Times* reports that the Ottoman government has decided to admit women to the universities, where a special course of Home Economics lectures on hygiene, domestic economy, and the rights of women in Turkey will be delivered for their benefit.

In enlightened Ottoman circles the government's new measure is regarded as an appropriate means for regenerating the world of Islam and placing it on a level with the civilization of the West.

In the *London News*¹ we find this report of progress in Japan:

"The so-called 'new woman' is in evidence in Japan, as almost everywhere else. In 1900 there was opened in Tokio a large University for women. Every subject is dealt with there, and schools of commerce, agriculture, and industry generally form a part of it. There are various other signs of the times. Miss Aki-ko, who founded the Bluestockings' Club of Japan, for example, has published several novels and gives lectures, although she has not adopted European dress. The club publishes a monthly review."

The frontispiece of this JOURNAL shows the food laboratory at the Tokio University for Women an illustration that accompanied the report.

ANNUAL MEETING OF THE AMERICAN HOME ECONOMICS ASSOCIATION

JUNE 30-JULY 3, 1914

The Western Reserve University, Cleveland, Ohio, has offered us hospitality for the annual meeting. As the Institution Economics Section will not meet at the same time, the meeting will not cover so many days as the last one. It will open Tuesday evening, June 30, and continue until Friday noon, July 3. The arrangement of last year, whereby one-third of the day will be left free, will again be made.

The Western Reserve dormitories will accommodate ninety of those in attendance, and the rest can be cared for at the Young Woman's Christian Association in Cleveland. Exact data as to cost cannot be given yet, but living expenses for the three days need not exceed \$10. There will be no attempt to secure special railroad rates, as it was proved last year that not enough people took advantage of the offer to make it possible to get such rates.

As the 1915 meeting is to be in Seattle, those who cannot attend that should avail themselves of the opportunity to go to Cleveland. Last year's meeting was the most successful in the history of the Association, but this year's promises to be fully as interesting.

¹ *Illustrated London News*, American edition, 53, 1913, no. 1388, p. 887.

THE Journal of Home Economics

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Vol. VI

JUNE, 1914

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The Journal of Home Economics is published five times during the year, February, April, June, October, December, by the American Home Economics Association.

\$2.00 A YEAR. FOREIGN \$2.25. SINGLE COPIES 50 CENTS.

HOW TO REMIT. Remittances should be sent by Draft on New York, Express Order, or Postal Money Order, payable to the American Home Economics Association. Currency, unless mailed in a registered letter, is at the sender's risk.

CHANGE IN ADDRESS. Notice of change in address should be sent Two Weeks before the date of issue on which the change is to take effect. The change cannot be made unless the subscriber's Old Address is clearly indicated in addition to the New Address.

AMERICAN HOME ECONOMICS ASSOCIATION
ROLAND PARK BRANCH, BALTIMORE, MD.

Entered as second class matter at the Baltimore Post Office.



Laundry, Washington Irving High School, New York City. See page 245.

THE Journal of Home Economics

VOL. VI

JUNE, 1914

No. 3

THE TRAINING OF THE SCHOOL DIETITIAN¹

CAROLINE L. HUNT

Expert in Nutrition

In entering upon a discussion of the training of the school dietitian, it is safe to begin with the statement that if terms are to be strictly defined, the school dietitian has hardly an existence today. It is safe to say, also, that so rapidly is public opinion growing in favor of expert supervision of school feeding that the time cannot be far distant when the school dietitian will have a position in the educational system as well recognized as that of the teacher. Since, therefore, the dietitian is imminent, the time has arrived when those who are looking forward to her coming may profitably form ideals for her qualifications and for the training which should be expected of her. Since, on the other hand, she is still but the creature of our hopes, these ideals will of necessity be as varied as the imaginations of those who form them. Any statement, therefore, of that which should constitute the training of the school dietitian is likely to be colored by personal opinion and can at best serve only as a subject for debate.

The statement that the dietitian has not as yet come into being should not be taken to mean that there are not today in connection with school lunch rooms many positions, that of manager for example, quite as honorable and important as the place which the dietitian will fill. There is no question here of comparative importance but rather of difference in function. In truth those who have gone before

¹ Presented at the Fourth International Congress on School Hygiene, Buffalo, 1913.

the dietitian have, by their recognition of new educational needs and by intelligent devotion to the welfare of the children, given us the very building stones out of which our ideals are being formed. Even Miss Matty, benignly presiding over her little shop in Cranford and selling almond comfits to children at a financial loss to herself "because the little things liked them so much," and substituting ginger and peppermint lozenges at an equal financial loss when persuaded that almond comfits were unwholesome, gave us an important foundation stone for our ideal—sympathy with and understanding of children. A willingness to take the preference of children into consideration, or, better still, an appreciation of the importance of so doing; of occasionally providing "almond comfits" and of coating with sugar, if need be, the "ginger and peppermint" of the diet is one of the first requisites of the successful dietitian. As Dr. Clement Dukes, Consulting Physician to Rugby, said in a recent address,² "The natural 'likes and dislikes' of the young in the matter of food are very powerful, and while they should not be encouraged, allowance should be wisely made for their satisfaction. They form a physical function of the age and constitution, and vary according to the stages of life—a craving at one time becoming a loathing at another."

Miss Matty, beloved prototype of the school dietitian, went bankrupt, or would have done so if her brother had not returned from India and paid her debts. She was followed by a long succession of small shopkeepers, more or less amiable and well disposed towards children, but usually either ignorant or willfully unmindful of their physical needs. Yet with all their shortcomings, those among them who achieved material success contributed another stone for the upbuilding of our ideal, for they were able to count costs and make financial ends meet. However lofty our standards for the dietitian, we must not lose sight of the fact that she will be expected to deal with material things, to buy in the markets of the new world, and to sell at a profit. She, like the small shopkeeper, must be able to strike a good bargain but the profit which she will be called upon to make will be the future health and physical well-being of the children who come under her care. Upon her business ability will depend to a large extent the quality of the food she will be able to serve, the degree

² Our Children's Health at Home and at School, Report of a Conference on Diet and Hygiene in Public, Secondary and Private Schools. London, May 13, 1912. Published by National Food Reform Association, Westminster, 1912.

of cleanliness she will be able to maintain and the amount of beauty in furnishings which she will be able to place before her patrons. The school caterer who is above the task of careful buying, often finds herself obliged to economize in places where saving is dangerous; for example, in the matter of the persons employed to wash dishes. Upon the foundation stone of our ideal, the one which stands for understanding of, and sympathy with, children, we therefore must place another upon which we will write "business ability."

After the small shopkeeper, came the lunch-room manager who was granted space in which to sell food within the school itself where the person selling it would be more or less directly responsible to the school authorities for the character of the food offered and for the manner of serving it. A connection once established between the person selling food and the educational system, there came a demand, often poorly defined, for a knowledge of food values on the part of the caterer, and for ability to serve balanced rations and scientifically prepared foods. This demand, when relieved of its indefiniteness, stands forth as a reasonable insistence upon the part of the more intelligent school patron that if science has anything to teach about the relation of foods to the upbuilding of the bodies of children, such knowledge must find practical application in the school lunch room. An understanding of foods, particularly in their relation to the needs of growing children, and a familiarity with the literature of nutrition are now expected of the lunch-room manager and must form a third stone in the ideal which we are building for the school dietitian.

The coming expert will be expected to have at her command a knowledge of those facts about food and those principles of nutrition that are generally recognized among scientists as established. This will always be necessary to a wise selection of food materials, good methods of cooking and of preparation in general, rational combinations of foods to form dishes or meals, and adequate precautions against impurity and uncleanness. But in addition to this argument (which we may describe as positive) for familiarity with the literature of nutrition and ability to follow the work of investigators there is another argument equally potent though negative in form. This has a bearing not so much upon the benefits to be brought to the children directly as upon errors which, for the sake of the children, the dietitian should avoid. It relates to the danger of confusing with facts the theories which are constantly forced upon the attention of those who cater for others as the result of the enthusiasm of faddists,

of personal preferences in the matter of flavor, and of family traditions about the digestibility or wholesomeness of various foods.

The theories which the dietitian will be in danger of accepting as facts, without adequate reason for the faith which is in her, will differ with the years. Perhaps the most continuous snag which she will encounter will be her own preferences and her own family traditions about that which is wholesome or digestible. There are few people in the world who are not obliged to avoid some one or more articles of food, even when in health. The person who has no thorough knowledge of dietetics is likely to generalize upon these personal peculiarities and to exclude from the meals which she prepares for others many wholesome and desirable food materials and dishes. The objections to such a proceeding on the part of the school lunch-room manager or dietitian are many. Among others, we may mention the fact that it tends to perpetuate error, which is unfortunate from an educational point of view. Again, if children are to be educated to be agreeable table companions they must be trained to be catholic in their tastes with reference to food, and should not be encouraged to reject this or that article of diet without due cause. The school dietitian has something to do besides influencing children to avoid unwholesome foods. She is under obligation to society to do her part toward preventing them from growing finical, and toward training them to enjoy the great variety of foods which nature provides.

The pressure of faddists upon those who cater for others takes one form today and another tomorrow. At present, its influence is being exerted in the direction of making certain food materials seem exceptionally valuable because they contain elements indispensable to the proper nourishment of the body. These faddists often leave out of account the fact that if a person takes a mixed diet it is almost impossible for him to avoid these much-vaunted elements. Tomorrow the faddist will take a different turn, and only those who know what has been proved and also what has not been proved in connection with the subject of dietetics will be able to take his teaching at its true value.

The faithful, conscientious labor of those who have charge of school lunch rooms have contributed yet another qualification for our ideal dietitian, for these women have realized that they are not only feeding the children of today but training the parents of tomorrow. They have sought to teach by their daily practice correct methods of preparation, the art of preparing a bill of fare, and good taste in furniture

and table furnishings. They have acted upon the principle that since children must acquire so much by laborious, painstaking methods, it is only fair that they should be given a change to learn the essentials of good taste and good breeding by their almost unlimited power of imitation.

The lessons which the school dietitian will find most important to teach by example, like the snags in dietetics which she will need to avoid, will change as the years pass. She will always find some practical reform ripe for her coöperation and just in the state to profit by her assistance. What it will be tomorrow we cannot say, but today it is doubtless the clean food reform. There is probably no greater menace to health from a single cause at present than from the uncleanly methods by which food is handled in public places and from the stale food which is served. The public is awake, aroused, horrified; and educational demonstrations of cleanly methods of handling food on a large scale would probably accomplish one hundred times as much today as they would have accomplished ten years ago. Every school lunch room, therefore, and all places where food is kept or handled, should be, not only thoroughly, but also conspicuously clean. They should be thoroughly clean for the sake of the immediate safety of those served and they should proclaim their cleanliness in order to establish higher standards in public places.

In a certain group of lunch rooms in Boston, owned and conducted by a scientifically trained woman, the work of disposing of food which is left unused at the end of the day and of deciding what shall be rejected and what shall be saved is entrusted only to highest salaried and most thoroughly trained employees. Similar attention is given to the washing of dishes, to the preparation of fresh vegetables, and to the care of all cloths used in cleaning the tables on which food is prepared or served. If the kitchens in these restaurants could be opened to public gaze by means of glass partitions or otherwise, they would be of more value than much formal teaching of bacteriology.

To take an example of a different sort: In a certain renowned state university, a water cooler with a common drinking cup attached, stood in the registrar's office just outside of the president's room for months after the bacteriological department of the university had been engaged in preaching publicly against such practices. Who can tell how much the campaign against the common drinking cup was retarded by the failure of this university to live up to its own teaching? Universities, however, influence directly a very small number of people in compari-

son with elementary schools. The trained food expert in the lower schools has therefore a weapon against filthy practices in the handling of foods whose possible effectiveness almost passes the bounds of imagination. Lunch room managers have fortunately often recognized and embraced their opportunities to teach and have by this means raised the standard for the training of their successors.

Up to this point we have spoken only of qualifications which school managers and dietitians should have in common, but in large school districts a separation is sure to come in time between these two trained officials. Then the manager will assume charge of the details of everyday administration, leaving the dietitian to make the lunch room a laboratory for the investigations of problems bearing on the general subject of the feeding of children.

The opportunities for research offered wherever food is served in large amounts under intelligent supervision have been recognized and demonstrated by the United States Department of Agriculture, and also by private organizations, physicians and health officers. The investigations of the Department of Agriculture have been mainly dietary studies³ conducted for the purpose of determining the amount of food actually provided in well conducted institutions where the children appeared to be well-fed and in good bodily condition. These investigations have resulted in the establishment of certain dietary standards for children which are to be found recorded in the publications of the Department.⁴ The Department by coöperating with individuals and institutions has not only shown the invaluable opportunities for research offered by institutional dining rooms but has also given training in methods of investigations.

The studies made by private organizations, physicians and school health officers have, up to this time, been chiefly in connection with conspicuous cases of malnutrition. Their purpose has been to determine the relation of malnutrition to underfeeding, bad housing, and other untoward conditions of living. These two lines of work, studies of normal and abnormal children, suggest that in connection with the school system there should be an expert who is not only in touch with investigators but is also trained to take for herself advantage of the enlarging opportunities for investigation offered by the growing custom of serving meals in the schools. We look, therefore, for the coming of

³ U. S. Dept. Agr., Off. Expt. Stas., Bul. 223.

⁴ U. S. Dept. Agr., Off. Expt. Stas., Circ. 110.

the school dietitian who, relieved of the details of administration, will have only the final decision as to what food shall be served and will by her own studies contribute to our knowledge of food in its relation to growth and development.

Understanding of child nature and some familiarity with the principles of pedagogy; business ability; knowledge of the literature of nutrition; and acquaintance with methods of investigation and research—these are the qualifications which we may reasonably expect of the school dietitian. Since it is obviously out of the question to outline here courses of training and study, we must be content to let the qualifications suggest the character of the preparation. The recognized need of thorough courses in chemistry, physics and the biological sciences as foundation for a working knowledge of dietetics and sanitation puts out of the question the possibility of any short cut to the profession. The widening opportunities for adding to knowledge which if neglected will entail serious loss to the public, tend to lengthen the path and to extend it into the graduate school. On the other hand, the need for close contact with children and the demand for business experience suggest pleasant side-trips into apprenticeship. The larger universities offer the long, broad path of scientific preparation and also, the enticing by-paths where practical experience is to be gained through their normal departments and lunch rooms.

Formal courses of training, no matter what their length or their breadth, can never create those kindly impulses in which the successful work of the school dietitian must have its origin. The best they can do is to make recognition of the value to the coming generation of the desire to substitute peppermint lozenges for almond comfits and to direct it toward a scientific system of school feeding.

THE ADMINISTRATION OF SCHOOL LUNCHES IN CITIES¹

ALICE BOUGHTON

Ten years ago school lunches were being served in two elementary schools in Philadelphia. Today they are being served in more than a hundred cities from Pennsylvania to California and from the Great

¹ Presented at the Fourth International Congress on School Hygiene, Buffalo, 1913.

Lakes to the Gulf. The lunch movement has passed the experimental stage and become a recognized part of the modern school system.

It is the purpose of this paper to deal with some of the questions, in the order of their relative importance, which must be considered by any community about to organize school lunches. These problems are such as must be taken into account regardless of the extent of service to be organized.

The relative merits of the central kitchen and the individual school kitchen is one of the first problems to be considered. In the central kitchen it is possible to have a trained person in charge of the actual work, so that a more uniform standard can be maintained. This is especially true where women's clubs or other volunteer agencies are responsible for supervision. Competent, responsible assistants are essential.

For the central kitchen, food can be bought and stored in large quantities. This means economy, but our experience in serving school lunches is not yet sufficient to warrant the statement that the central kitchen plan results in actual money saving. The cost of food distribution is considerable, but there seems to be little doubt that a better standard of cooking and of serving as well as a greater variety of foods may be obtained for the same money if the food is prepared in a central kitchen, or, in a large city, in a chain of kitchens each of which serves one or more school districts. So far the possibilities of combining the work in the high and elementary schools have not been given a trial. There would seem to be no real difficulties, other than those of administration, in taking advantage of the high school plants for the preparation of food for the elementary schools. In most high schools it is possible to have steam cooking utensils, dish washing machines, potato peelers and other labor-saving devices which, because of expense, cannot be installed in the small elementary school kitchen. This coöperation between high and elementary schools would permit of greater variety and lower food and service cost for both.

On the other hand, with such a system as that in Philadelphia, where the cooking is done in each school, the children come into close contact with the working assistants, observe the preparation of food, and unconsciously acquire high standards. Many of them show great interest in what goes on in the kitchen, ask questions, and learn the names and uses of the various utensils. It is probable, however, that the advantages of the individual kitchen could be incorporated with the central plant.

No matter what system of preparing food is adopted, too much stress cannot be laid on the necessity for a good cost accounting system. Whether the lunches pay the cost of maintenance in full or in part, those in charge should know exactly the expense of running the plant in terms of rent, heat, light, deterioration, renewal of equipment, distribution, preparation, service and supervision, as well as the cost of the food. They should also know whether the gain through buying food in large quantities is sufficient to cover the running expenses of the plant, and whether, if the selling price covers service cost as well as food cost, the child gets as much for his penny as he does when he buys at the corner grocery. The collection of this information does not pledge us to the adoption of any given system of administration. It does, however, give us a scientific basis for the measurement of results and a means for accurately comparing the work of one city with that of another.

A system of records carefully worked out to meet special needs is indispensable. This should include weekly menu cards for the saleswomen at each school, with spaces for daily receipts and weekly totals; a record for each school showing total receipts and expenditures for the month with sufficient space for an itemized expenditure account. A time sheet is needed for registering the working time of employees. This time sheet furnishes a basis of comparison between the various schools where employees are paid by the hour, and shows the gain in time through convenient kitchen arrangement and equipment. There should be petty cash sheets so that the saleswoman will have no difficulty in keeping an account of her emergency fund. There should be order sheets of uniform size which fit into the director's note-book, and loose sheets of the same size for miscellaneous memoranda. Care and thought in these details insure efficiency with a minimum of effort.

In any city having more than two or three schools, there should be a central office where the assistants can get into daily touch with the director, bring their record cards each week for criticism, and confer with her regarding the difficulties they encounter in their work. Once a month it is well to have a general meeting of the whole force. This will help to keep all interested and develop a spirit of team work. Very often the director gets valuable suggestions from her assistants, who through daily contact with the children acquire first hand knowledge of their needs and tastes.

The efficient administration of funds available for school lunches depends largely upon the intelligence exercised in the purchase of

raw materials. The director must be governed in her selection of food stuffs, not by guess work but by scientific measurement. Each food sample should be tested for the percentage of protein, fat, and carbohydrate, and for its caloric value. The school director should make her purchases on the basis of food values, although this does not mean that she must make the chemical analysis herself. In every city arrangements can be made to have foods tested in the university or municipal laboratories; and the school lunch director will generally find the municipal authorities glad to coöperate.

Another important problem is the equipment of kitchen and lunch rooms. The school children are not obliged to buy the lunch prepared for them. They will not buy it unless they can get as much for their money in just as attractive a form as the street vendor offers them. In selling cheap food, careful attention must be given to service, and, no matter how simple, the equipment should be pleasing in appearance. When possible the serving dishes should be white. They appeal to the children as being clean and attractive, and what is no less important, the director can tell at a glance whether or not they have been carefully washed. In Philadelphia white enamel has proved most satisfactory.

The lunch hour may become one of the social features of the school if due attention is given to making the lunch room attractive. This is especially true in high schools. In elementary schools the lunch-room should be of easy access to play-ground or play-room so that as soon as the children have finished their meal or while they are waiting for their turn to be served, they may be playing out-doors.

If the director or her assistants have had normal training in domestic science, they may give lessons in the physiology of digestion, using the school lunch as a working basis. The whole system of lunch room expenditures should be the common property of the children. They should understand just what their money goes for; what proportion for rent, what proportion for service, and what proportion for food.

In the past, correlation between school room and lunch room has not been close, yet it seems evident that the school lunch offers a laboratory where valuable instruction to school children can and should be given. Such correlation, however, is not practical unless the director of the department possesses certain important qualifications. In order to fully develop the educational possibilities of the school lunch, she must be not only a business manager, an accountant, a skilled housekeeper and a trained dietitian, but also an intelligent and well equipped teacher.

A question which will undoubtedly arise in the future in connection with the school lunch as it has already arisen in connection with medical inspection, is whether its administration should be under the direction of the educational or the health authorities. Most of us who are engaged in this work feel strongly that the responsibility must rest upon the public school system. The health authorities, through the Department of Medical Inspection, deal primarily with the child who is ill and pay little attention to the healthy child. The School Lunch Department places emphasis, not upon the sick, but upon the well; its primary aim is to serve, not the abnormal, but the normal child. The School Lunch Department might very properly coöperate with the Department of Medical Inspection in the preparing and serving of special diets to the under-nourished, or, on the requisition of the Department of Charities, in serving food free of charge to children of indigent parents. In other words, the school lunch might serve as a food clinic to children suffering from malnutrition. Coöperation between school and health authorities should be close and constant, but for purposes of effective administration it seems evident that the provision of food for normal children to be served in the school buildings should be under the direction of the school authorities.

The control of the School Lunch System should be in the hands of a central committee composed of representatives from the Department of Superintendents, Departments of Health, Recreation, and Domestic Economy, and of other interested persons or associations. If public funds are spent, the members of this central committee would properly be appointed by the board of education. This committee should meet several times during the year to settle questions which arise, but there should be a smaller executive committee meeting monthly to work with the director and aid her in keeping the system running smoothly. Whether or not the director of a luncheon is a paid employee of the board of education or of an outside organization, she should have full authority over the details of the work for which she is responsible, subject, of course, to the approval of the executive committee. She should be responsible, in part at least, for the purchasing of food, and wholly responsible for preparing and serving it. She should make all menus and know the food values of whatever articles are sold. She should be consulted in the buying of all equipment.

School feeding is a big business. In Philadelphia alone 170,000 children in the elementary schools are spending approximately \$200,000 on their lunches each school year. As only about 6000 of these ele-

mentary school children are cared for by the School Lunch Department, this money goes largely to the street vendor. During the past year 10,000 children in the high schools spent \$92,000. Their money was spent for clean, nutritious, and palatable food, prepared and served in a sanitary manner in a clean and attractive room under expert supervision, while the overwhelming proportion of elementary children for whom as yet no school lunches have been provided, spent their pennies on the street, getting in return for their money dirty, adulterated food. The child is in the schools. He wants food, and has the money with which to buy it. The practical question for us to settle is how he shall get his money's worth.

HOUSEHOLD SCIENCE IN SECONDARY SCHOOLS

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The old idea of manual training and sewing, the making of a few perfect models, each small and useless, except as a means of acquiring manual skill, has disappeared. The aim now is not only to train the hands, but to arouse and develop the girl. The educational catch words are "Preparation for life," "Vocational training," "Habit formation," "Efficiency." Home making has become a profession and girls must be prepared for it. Trades demand skilled workers and they must be trained in the schools. Household science, therefore, is no longer a subject that can be given casually, with little time allowance, no equipment and an indifferent teacher. It has become one of the centers around which are grouped other subjects. Literature, art, history, science—all help to enrich and strengthen this important part of a girl's training. The development and needs of the modern home; the great industrial problems; the relationship of capital and labor; sweatshop work, child labor, are all questions which should be of vital interest to the future wage earner and home maker. As a consumer every girl must learn "how and what to buy." Women are the family spenders these days and girls should know the worth of the many articles that go to make the furnishings of a home and the clothing of a family.

Household science in secondary education has taken great strides in the last ten years. It is now quite the exception in large cities not to find it included in the high school curriculum. A large majority of

the high schools in the smaller towns also offer some kind of work along the lines of home training. In many of the courses of study it is a required subject, especially in the trade and technical high schools. In these schools it generally runs through the entire course, five periods each week for four years. The physical, chemical and biological sciences in these schools are adapted to the home subjects and work in close correlation. For the teacher of household science to teach all of these subjects means that some of the practical sides of the work are neglected. The applied courses in the chemical and physical laboratories have been found to be much more satisfactory if taught by the regular teacher of these subjects.

The physics and chemistry as now taught in many of the high schools are not so valuable to girls as they are to boys who are preparing for technical work. We all know that these subjects are especially adapted to form habits of logical thinking, reasoning and concentration. The problem now before us is to make such work equally valuable for girls and boys, and to plan out courses in these sciences that will include all the underlying principles, and at the same time show their application in the processes of housekeeping.

Science in the chemical laboratory can be used to show how foods are adulterated, or what fabrics are weak and what are strong, with as much educational value as in determining the percentage of each element in a given compound of remote interest to the student.

The applied physiology as taught in connection with household science is the foundation of hygiene; this is better understood when it is preceded by some work in biology, where the cell life is illustrated by plants. The main part of the work in physiology is the study of the intake and the output of the body and the nature of the digestive changes.

Very closely related to the subject of Home Economics is the subject of bacteriology, which includes the study of bacteria, yeast and mold. This can be taught in direct connection with the practical work in cooking, no laboratory being needed. A microscope to show the actual appearance of bacteria, and a few Petri dishes and test tubes furnish the necessary apparatus. The nutrient gelatine can be made in the kitchens or furnished by the Board of Health. Culture plates exposed to the air before and after class, or before and after sweeping show the distribution of bacteria and molds more vividly than any amount of talking. Tests as to the keeping of milk, with and without pasteurization; the effect of drying food; and the effect of decaying fruits are

instructive and interesting. The function of yeast in bread making and the results of mold on cheese are easily explained by simple experiments.

In some of the academic high schools, the tendency of the last few years is to omit a second language and substitute courses in household science. This seems a wise plan for it gives the work a regular place in the course of study. It has proved to be of more benefit to pupils than three years of a foreign language. In the majority of high schools however, only one year is given to the subject. It is as yet an unsettled question as to where that year shall come. Among the pupils who enter high school only 75 per cent remain until the second year, 50 per cent remain until the third year, and 25 per cent remain until the fourth year and graduate. To benefit the greatest number of pupils then, household science should be put in the first year. It is not the best psychological time, however, for the girls. They often have had just enough in elementary schools to make it appear an old story. In the third and fourth years we find them more deeply interested in the work. It is sometimes the case that they are already contemplating homes of their own or that the family burden of ways and means has fallen upon them all too early.

The topics covered by most of the courses under the heading of Household Science are: foods and nutrition, sanitation, preparation and serving of foods, care of infants, the home care of the sick, the furnishing and care of the home, sewing, and dressmaking.

At present, because of the better understanding of the science of foods and nutrition in the colleges and training schools, teachers are better prepared to teach these subjects. The practical side of the work, that is, the actual cooking has always been emphasized and should always be an important side of the work. The study of the needs of the body and the way in which the different foods best meet these needs, however, is one of the most interesting ones to the pupil in the secondary schools. She may, up to this time have been interested only in the taste and appearance of food. The study of the caloric expenditure of the body and the weighing and proportioning of the food equal to the expenditure opens up a new field. The cost of the food for each dish planned and cooked is computed and the comparison made as to its energy value. This sets forth problem after problem to be solved by the young housekeeper. Most of the cooking is in the form of preparing meals which are correct dietetically and adapted to the class of girls taught. These meals are then properly served.

In schools where there are housekeeping rooms or a model apartment, the pupils have a chance to grasp household problems on a much wider scale. Correlating with the art classes the rooms are furnished in a harmonious and simple manner. There are many combinations of furnishings and experiments of different effects made and criticized by the classes. The entire care of these rooms is taken by the pupils, different groups working each period of the day. One period the house is cleaned, the floors polished and absolute neatness and order brought about. The next period a meal is prepared. One girl sets the table, another goes to market, and so on. In the six or seven rooms, groups of four or five are working, each taking the responsibility of a particular task. Theories are put into practice that have been talked over in the laboratories and kitchens.

The technical work in sewing is, of course, given by the teacher who is especially trained for this work. As with domestic science, in many schools sewing is required or it may be elected in place of a second language. The equipment should be simple but convenient. Sewing machines, one for every four or five girls, up-to-date and in order, are a necessity. As a rule the greater part of all material should be furnished by the pupils themselves. The finished products then belong to the makers and as such have an added value and are worked upon with independence and pride.

The course of study varies in different localities and in different schools but the ideal is the same—to teach processes and principles, to train girls to think, not merely to make particular articles. Each garment, for example, is a problem to be solved by every pupil. Real skill is to be sought for also, not only because it is valuable in itself, but because true appreciation of technical excellence can only be gained through active production. Speed should be cultivated, because time is precious and wasteful motions should be avoided in all habit formation. During the first term the pupils cut and make several undergarments and perhaps a cooking cap and apron. On these garments they review or learn the several stitches that are used by all hand sewers. The sewing machine is then introduced.

The cutting and construction of garments are always interesting processes and a knowledge of correct lines and easy ways of fitting should be gained by all pupils. Cotton cloth, its manufacture and use, its cost and value to the consumer should be investigated. Stores and factories should be visited if possible. The bargain counter and a comparison of home and factory made garments are profitable

discussions. Analysis of the new fabric is of interest. The good old fashioned tests for wool are tried, collections are made showing values and prices, color tests are experimented with. Why is wool warm? What effect has its adulteration? What constitutes hygienic clothing for growing girls? The effect of weight and pressure upon health. These are some of the natural questions and suggestions that grow out of work with dress materials.

After a simple dress has been made pupils are ready for drafting and then for the use of paper patterns. Time should also be given to household linen, millinery, baby clothes, and finally the girl's own graduation dress. This dress should be designed and planned from the economic standpoint to secure a really fine garment for a limited amount of money.

The care of infants is fast becoming one of the most important parts of the work in household science. More and more is the care of the baby at home left with the big sister, and an intelligent knowledge of how to wash, feed and amuse the child is almost a necessity. These girls too, have often to assist in caring for a sick member of the family so that a knowledge of "first aid" is useful. All of these topics tend to develop a womanly instinct and awake a keener interest in one's fellow beings. Aside from the knowledge given about the home and society, the aim of the course in household science is to form habits of order, neatness, accuracy, promptness, speed, patience and reasoning. If we can do this the outlook on life of the high school girl will be broadened by her course in household science.

PURE TEXTILES

L. H. DEWEY

United States Department of Agriculture

The practice of substitution, adulteration and fraud is by no means confined to food and drugs. The use of cheaper substitutes for standard materials has been practiced from the earliest times of manufactured articles, but it seems to have increased during the past fifty years, and with the increasing adulteration there has grown up an agitation for protection against it.

In the present age it has become the custom to turn to the law, somewhat blindly perhaps, but with a vague notion that the law alone

will suppress the evil. At least eight different bills, designed to secure pure textiles, were introduced in the two houses of Congress within a year and others had been introduced at previous sessions. Fortunately none of these bills have been enacted into law, for none of them appear to be quite practical and their passage would merely complicate matters without fully serving the purpose for which they were drawn. It seems very probable, however, that a more comprehensive and more carefully prepared measure may be presented soon. A special committee has been at work upon this matter for some time and have collected information that should enable them to draw up a measure designed to correct the evils without causing undue hardships to honest manufacturers or dealers. Most of the measures presented heretofore have been opposed by manufacturers, but statements in the textile trade papers indicate that their attitude is now changing in favor of just and reasonable regulation.

In the days when our grandfathers sheared their sheep, and our grandmothers carded and spun the wool and dyed the yarn with which they knitted their children's stockings and mittens there was no question but that these articles were all genuine new wool. Those little red and white striped mittens seemed never to wear out, and those woolen socks that used to feel so comfortable inside of the copper-toed boots withstood many kicks before they had to be darned. But the copper-toed boots and the hand-knit stockings and the homespun yarn have all disappeared. They have been replaced by the mill-spun yarns, machine-knit socks and factory-made shoes. Our good mothers and grandmothers knew personally those for whom they were spinning and knitting and the possibility of cheapening the article never entered their minds. But the spinner of yarns in the mill knows only that he will get his wages on Saturday night; the knitter operating a machine is interested only in turning out so many dozen pairs each day, for she knows not who spun the yarn or who may wear the socks. The personality of the consumer as an incentive to honesty is entirely removed. The goods, whether knit or woven, pass through the hands of the selling house, wholesaler, jobber and retailer before reaching the consumer. The manufacturer may therefore be very much in the position of the honest farmer who packs some dirty wool inside of a nice clean fleece and tries to console his conscience with the thought that the manufacturer who uses the wool can never know who packed it. Furthermore there is divided responsibility in the

work of manufacture. One company spins warp yarns; another company spins the weft or filling; another company weaves these yarns into cloth and still another company finishes the goods and prepares them for market.

In addition to this divided responsibility there is often ignorance on the part of each manufacturer or dealer regarding all processes in the production of the article except the few that he himself attends to. The manufacturer rarely has any definite knowledge regarding the production of the raw wool, silk, cotton or other fibers that he uses. A cotton manufacturer from the North would need an introduction to a plant of American upland, upland long staple, or Sea Island cotton, and the woolen manufacturer inspecting the sheep at the county fair will be found looking curiously at the labels to distinguish between Cotswolds, Southdowns and Ramboulet merinos. The weaver knows little about the spinning or the finishing; the seller has only a superficial knowledge of any of the processes of manufacture, and the retail clerk in the department store knows only the goods as they are placed on the counter to be sold. With a new series of novelties coming out each season, so that one is scarcely familiar with marquisettes and chamoisettes before he must learn about ratines, tango cloth and polyreflets, it is almost too much to expect the retail clerk to have an intimate knowledge of the different kinds of materials entering into all these novelties or even into staple goods like serges, poplins and gingham.

If it is difficult for those actually engaged in the production and sale of the goods to know about their composition, how much more difficult is it for the purchaser or consumer to learn about it? But how many consumers give even a thought to the composition, providing the color and finish are satisfactory? One occasionally sees an inquisitive customer pick up a piece of pongee silk and smell of it or press a wet finger against an alleged linen handkerchief, but usually there is little opportunity to test goods at the retail counter. If a purchaser occasionally asks about the composition of goods, the retail clerk and even the head of the department usually answer with pitying looks as if such questions could be asked only by persons mentally unbalanced.

The purchasing public considers the appearance and price only and for two generations at least has paid no attention to composition. The careless purchaser, making no effort to learn about the quality

of materials may be quite as much to blame for misnamed or adulterated goods as the manufacturer who makes them. In fact, sometimes more so, for the manufacturer usually makes goods on orders and the wholesaler placing the order is not deceived. The deception usually occurs somewhere between the wholesale house and the final purchaser.

The bills introduced in the Senate and House of Representatives, thus far, provide for the labeling, marking and tagging of all textile fabrics, especially clothing, with penalties for misbranding. Some of the bills include leather and rubber goods in addition to textile fabrics. One bill, shorter yet more comprehensive than the others, includes all manufactured articles. It is entitled "A bill prohibiting fraud upon the public by requiring manufacturers to certify to the materials of which a manufactured product is composed, and to place their name upon manufactured articles or containers."

A bill introduced December 8, 1913, by Representative Lindquist, of Michigan, himself a woolen manufacturer, follows in general the lines of most of the bills preceding and it may be taken as a type of the best of them. This bill makes it unlawful for any person to misrepresent or misbrand any article of clothing and other articles such as carpets, leather goods, etc. It further prohibits interstate commerce or importation of misbranded articles; provides for the fumigation or disinfection of articles, for the collection of specimens for examination, for the examination of specimens in the Bureau of Chemistry of the Department of Agriculture, for the prosecution of offenders by district attorneys; defines the terms wool, silk, cotton, etc.; provides that articles for interstate commerce must be labeled, and how they shall be labeled; and provides further that no dealer shall be prosecuted under the act if he can show a guarantee from manufacturer or dealer that the article in question is not misbranded.

One criticism that may be made to nearly all the bills is the attempt to designate every class of article separately by name, when it is obviously impossible to list all that are now known, while new types and classes are appearing every year.

A serious difficulty in enforcing the provisions of the bills proposed may be found in identifying certain fibers. While it is comparatively easy to distinguish, by means of the microscope or in some instances by chemical analysis, between wool, cotton, silk, linen, ramie and jute, it is well-nigh impossible to distinguish with certainty in all

instances between fleece wool, shoddy and mungo, or between flax and hemp fibers. The presence of shoddy may usually be detected by microscopic examination for some of the fibers are nearly always dyed differently from others or differently from the fresh wool, but since they are all wool it is practically impossible to positively identify each individual fiber so as to determine accurately the percentage of shoddy present. Hemp fiber costing the manufacturer 8 to 10 cents per pound may be substituted for flax costing 20 cents, in coarse yarns or carpet warp, and it would be practically impossible to detect the difference.

The most frequent cases of substitution and adulteration at the present time are the following: Shoddy, mungo and cosmos fibers used in woolen goods; cotton and sometimes jute fiber instead of flax in linen goods; artificial silk in place of genuine silk; jute in place of ramie; jute in place of hemp.

There are more than a dozen different grades of shoddies, mungos, cosmos, and extracts regularly quoted in American markets and used to make yarns for the manufacture of woolen goods. In Europe shoddy is used much more than it is in this country. Imported cloth is much more likely to contain shoddy than domestic goods at corresponding prices. Some of the higher grades of shoddy are as good or possibly better than low grades of fleece wools. The best all-wool white shoddy yarns are regularly quoted at prices about equal to the quotations for light gray mixed yarns of fleece wools. The presence of the adulterations in woolen goods can not usually be determined without microscopic examination.

The substitution of cottons for flax is facilitated somewhat by the careless use of the term linen to include cotton substitutes with genuine linen. Our grandmothers had real table linen and real bed linen, but now the term table linen often means cotton table cloths and napkins, and one almost has to go to Mexico or Europe to find linen sheets. The purchaser usually knows when she is buying cotton sheets or table cloths but may not be so certain in other lines. Cotton is now spun in uneven yarns to resemble flax yarns, and the woven goods are finished with alum and magnesia in the sizing and even perfumed to resemble the odor of retted flax, so that it requires very careful examination to distinguish the cotton imitation from genuine linen before it is washed. It may be identified very easily by the microscope, but until microscopes are furnished to customers in the

linen goods departments most of us will have to accept the salesman's word for it.

During the past five or six years increasing quantities of artificial silks have been sold in our markets. This is a comparatively new form of fraud and in most instances the retail dealer has been as ignorant as the customer.

Artificial silk is made from cotton or pine wood pulp completely dissolved forming a slightly viscid fluid which is pressed through fine holes. The strands coming from these holes, after being solidified and purified, have an appearance very similar to genuine silk, but they are solid instead of hollow, about one-eighth as strong as real silk and very much weaker when wet. There are several different kinds made by different processes, but none of them are as strong or as durable as genuine silk and none will endure heat and moisture as well as real silk. Most of them would be ruined by moistening them and attempting to press them with a hot iron. Artificial silk is used largely in trimmings, but it is also used in other lines of goods. Probably no dealer will guarantee, as genuine silk, any of the so-called silk petticoats selling at less than three dollars. Some of these are probably silk finished cotton, which is more durable than artificial silk.

Ramie is comparatively new as a material for dress goods, in this country, and, being new and unfamiliar, offers exceptional opportunities for misrepresentation and fraud. Fine bleached and combed ramie tops, the best grade of ramie fiber, cost the spinner 50 to 70 cents per pound. It is the most beautiful and most expensive vegetable fiber on the market. But dress goods are often made of the noils or short ramie fibers costing 12 to 15 cents per pound. The use of 15-cent noils instead of 50-cent tops is still ramie and within the law as the bills are drawn, but the substitution of 4-cent jute is beyond endurance. About three years ago a ladies' tailor made some gowns, at \$40 and upward, of goods that he called "Punjab ramie linen." Neither ramie nor flax are produced in the Punjab, but jute is, though not as much as in other parts of India. This Punjab ramie linen was imported by another firm and the tailor may be given the benefit of the doubt as to whether he knew what it was, although he should have recognized its resemblance to cheap grades of buckram used for stiffening. This "Punjab ramie linen" was found to be only jute burlap, and for the sake of the pride of the fashionable

wearers we shall hope that no one told them they were dressed in potato sacking.

Jute is commonly sold as hemp in so-called hemp carpets, hemp carpet warp and in the webbing supporting the seats of upholstered furniture. If genuine hemp were used, these articles would endure hard wear many years, but the life of jute is very short, even without wear, for it rots upon exposure to the air.

A just and comprehensive law, properly enforced, will aid in doing away with some of the shams, frauds and misrepresentations, but it will not be fully effective until the purchasing public is educated to expect and demand honesty all along the line. Ask the retail dealer to guarantee the kind of material; not the quality only for that is indefinite, but the kind of material. Some articles are now guaranteed from manufacturers through all the dealers and retailers to the ultimate consumer. Many more might be so guaranteed if there were a demand for it.

It has been well said that "it is difficult to legislate honesty into a community," and it will be practically impossible if we continue to fulfil P. T. Barnum's statement that "The American people like to be humbugged." But every one of us may help to develop honesty by using reasonable efforts to avoid being cheated, and at the same time believe and act on the belief, that most people, whether manufacturers or retail dealers, are fully as honest as we are.

THE RELATION OF HOUSE PLANNING TO HOME ECONOMICS¹

HELEN BINKERD YOUNG

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In looking over the curricula of various schools in Home Economics, one finds here and there an attempt to introduce house planning into the schedule. To one not accustomed to think in terms of planning, the relation between this subject and Home Economics may not at first be clear. It may be necessary to explain why an understanding of good house planning is fundamental in Home Economics training.

Conceived from one point of view, Home Economics aims to so organize the profession of home making that women shall have leisure for family enjoyment, for personal growth and for community affairs. This means that the business of house keeping must be placed on an intelligent and labor saving basis. To this end a woman must know her work; she must know what she is to do, and how she is to do it; and she must see to it that the laboratory in which she operates is so designed as to fit itself to her scheme of work. It is of small use to organize the work unless first of all we organize the work place. In other words, for organized housekeeping an organized house plan is needed.

Constructively stated, the time has come when we must realize that forceful and direct arrangements of floor plan, do of themselves create conditions favorable to simple house work and to effective decoration, while crowded, rambling, indirect or even unstudied arrangements, create forms of waste that no amount of added equipment can cancel. While the use of household equipment should not be undervalued it cannot yield full results until the first great economy, that of the plan, is established. Nor can household decoration be seriously and fundamentally taught except from the standpoint of planning and the structural division of space. We need a readjusted vision of the house, both as concerns its plan and its fittings. As long as we attempt to fit economic house keeping into uneconomic arrangements, there will be lost motion. To accept dwellings of the day as fixed conditions, is to limit the full demonstration of Home Economics.

¹ Presented at the Sixth Annual meeting of the American Home Economics Association, Ithaca, 1913.

The development of the house plan has a direct bearing on the servant problem and the high cost of living. By intensive planning of the working areas, humane and economic conditions are assured to the worker; service is reduced to a minimum and many times the homemaker becomes independent of outside help. If outside help is needed, however, such conditions appeal to the most intelligent type of worker, and in the long run, add greatly to the peace and permanence of the home management. The compact forms of modern English and German as well as of American houses reflect very clearly the increasing difficulties with domestic help.

The increased cost of building and of upkeep also react directly on the house plan. Because of our higher standards of living as well as the greater cost of labor and of building materials, a square foot of house room now costs twice or three times as much as it did a generation ago. Such a realization puts a new demand on every foot of enclosed space. Economic planning demands that every square foot of floor area shall do a square foot's worth of work, or shall add a square foot's worth of effectiveness to the interior. We must not spend space for idle areas. Every foot of the plan must work either for economy or for beauty.

The basic relation between the house plan and household decoration cannot be passed by without more comment. If we believe that our surroundings affect us and that the aim of household decoration is to create a virile environment, we must realize at the outset that no surface application either of color or design nor any addition of movable furnishings will score so heavily in favor of total effectiveness as will a well-designed structural setting and the simple effect of studied light and shade.

For the reasons then, that the floor plan bears directly on the house work, on the servant problem and on the high cost of living, and for the reason that it forms the logical basis for the development of environmental art, house planning should be understood by Home Economic teachers. Through the study of planning, intelligent standards of housing may be formed and future building may be guided in an economic direction.

Practice in planning is also of general cultural value, for a sense of planning is broader than its mere application to building. Good planning requires careful analysis and promotes simple and direct reasoning. Such training should enable one to distinguish essentials from non-essentials in any problem and to organize the whole into a

definite program. Planning should enable one to plan work, strength and time as well as space.

It is not advisable, however, for people to dabble in architecture, or aspire to plan their own houses unaided, or to learn a little planning as an end in itself. Such work is necessarily brief, and is by no means exhaustive; it is intended to develop an appreciation of forceful arrangement, merely as a means toward an end. A study of hygiene and of sanitation does not equip one to practice medicine, but it does teach one to some extent how to prevent disease. Similarly the study of house planning as above described helps to prevent uneconomic structural situations. Such a course therefore stands not by itself, but as basic work which may be relied upon to strengthen other subjects.

In order that the study of house planning shall be valuable to Home Economics teachers and students, it is vital that the person teaching the work shall have not only training, but also originality. To study and imitate types of floor plans with which we are already familiar is merely marking time. We arrive nowhere unless behind this study there is a purpose and a point of view; that is to say, if familiar arrangements are used they should be analyzed for the purpose of locating waste space, of understanding directness of plan, of learning the value of vistas, and the "ear marks" of strong or weak design; and these points should be brought out as the various plans are discussed.

All women should understand what elements govern economy of plan and how those elements may be combined to secure comfort and beauty. A study of house planning teaches one where spaciousness or compactness is desirable; thus every foot of enclosed space may serve a definite purpose. In general, economy of plan is expressed in compactness of floor area, in grouped chimney arrangements, in simplified hall and stair treatment and condensed kitchen arrangements. Spaciousness is in general obtained by treating the living area as a unit with continuous lines of composition connecting such subdivision as living room, dining room, library, etc. Windows and doors are placed with relation to these axes, and long vistas indoors and out are established. In other words an understanding of spaciousness depends upon a knowledge of the laws of composition and design.

The house plan must therefore be in a sense architectural if we are to secure the best results; for "architectural arrangement" is merely a professional description of planning space in an orderly and systematic manner. Convenience is the by-product of the best design, and a simple architectural plan brings in its wake economic working condi-

tions. In working over hundreds of homemade plans not one has been found from which, by applying the principles of design, it would not be possible to either develop a more spacious and economic arrangement within the given area or to develop the given requirements within appreciably less area. Such an experience carries its own conviction as to the worth of high-calibre planning.

The three hour course in house planning given in the Department of Home Economics at Cornell is placed in the first term of the Junior year. It consists of two lecture periods of fifty minutes each and one laboratory period of two and one half hours. The lecture work presents to the students such discussions as: the relation of the house plan to home making, to the servant problem, and to the cost of living; economic versus cheap standards of building; developing house and grounds as a unit; the aesthetic obligation of the property owner to the community; exterior color schemes; and such phases of heating, plumbing, lighting and general construction as affect one's standards of sound housing. It is the special aim of this course to take a progressive view of housing, by discussing the use of new building materials, simpler plumbing methods, new floorings and the effect such changes would have on the design, the upkeep and the total economy of property. The bulk of the work is, however, a discussion of planning. A collection of lantern slides is used to illustrate plans and exteriors both good and poor. Every plan is analyzed on the score of size, shape, arrangement, design, economy and originality of treatment. Exterior views are analyzed for general proportion, method of roofing, window treatment and the design of structural features. An appreciation of domestic architecture is thus developed.

The laboratory work in house planning consists of such problems as the following:

To plan a one-floor arrangement on a scale of $\frac{1}{8}$ inch to 1 foot (bungalow apartment or one floor of a two-family house); to plan (on same scale) a two floor arrangement (a suburban house for a given site and for a family of given size, or a farmhouse); to plan an economic kitchen on a scale of $\frac{1}{4}$ inch or $\frac{1}{2}$ inch to 1 foot.

In conclusion, work in planning cannot be taught to immature students, but should be reserved chiefly for persons beyond the high school age. The essentials of good planning should, however, be understood by teachers who are working with Home Economics and decorative subjects in the secondary schools. Just as chemistry underlies the teaching of all food work, so a sense of house planning

should underlie the teaching of decoration, sanitation and household management.

Our present problem is to find persons who are fitted to teach planning, for it is not a subject that can be "picked up" by any one, and, if improperly taught, not only fails to be helpful but becomes positively harmful. No one can teach to others a subject which he himself does not understand. In the absence of trained teachers, seminary sessions or round table discussions could be appointed, and all prevalent and new ideas of housing could be challenged and discussed. Often the interest of some live, sympathetic architect who really plans houses could be secured, with mutual benefit to himself, to teachers and to students.

We should look forward to the time when the house shall not be viewed as a desirable thing to have and to hold for its own sake; shall not be a statement of material prosperity with which to impress one's friends, but shall serve as the true laboratory of home making. A place where in every arrangement one feels such simplicity, directness and refinement as one needs for plain living and high thinking.

We cannot of course immediately demolish or remodel all dwellings that do not come up to these newer ideals of housing, but if education in home subjects takes a far look ahead, it must begin now to direct the building of coming generations in an economic direction.

PRESENT TENDENCIES IN HOUSEHOLD ARTS TEACHING

HELEN KINNE

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The situation in the field of household arts is most interesting and the point of view in regard to methods of teaching is rapidly changing. A strong tendency exists toward making the subject more effective than ever before in the life of the community, and the progressive household arts teacher finds herself critical of her own methods as she attempts to meet the new problems that confront her daily. Well organized courses in domestic science and domestic art proceeding in a logical and orderly method from the point of view of the subject itself and well related to the other subjects in the school curriculum do not meet the present needs. Indeed we find ourselves face to face with the fact that in this subject as in all others we have developed a

decided academic tendency and are using methods that were progressive ten years ago but that must be discarded or vitalized if the work is to be abreast of the times. The change has doubtless come about as a result of the development of vocational education which is revolutionizing the stereotyped school program; and the growth of extension work in the rural communities of the United States is reacting upon school methods.

In order to meet the needs of the community, subject matter in the household arts needs to be greatly enriched and organized in such a way that the pressing demands for knowledge along certain lines shall be adequately met. This means, in the first place, that the subject must be looked upon, as a whole, as the study of the home itself with less emphasis placed upon such topics as food preparation, and the actual sewing and making of garments. There are of course certain fundamental principles of nutrition and food preparation always to be taught, and certain other principles in the field of textiles that may be looked upon as constants. There are other topics that may be classed as variants to be selected and emphasized whenever need arises as, for instance, the cost of food, markets, and methods of buying, food sanitation and adulteration of textiles. At present these variants are of vital import in our daily lives and must therefore be emphasized in any household arts course that is to be a live course. To illustrate, instead of basing a course upon food principles and methods of preparation, food economics should be made the large thought and the question of these principles should be secondary. Some such problem can be given as the following: What should be the allowance for food for a family for a year with a given income? This being decided upon what kind of food can we have every day? Or, given 50 cents, what can be purchased for a family of four or six for a dinner that will fulfill the dietary requirements? Such questions as these when taken seriously will revolutionize the course of study.

Another aspect of the matter is the effect upon laboratory methods of the tendency toward vocational work. In work in foods the giving of small quantities only is a most ineffective practice. While the small quantity need not be discarded for the teaching of certain principles it must be in some way supplemented by the handling of material in large quantities. This must be accomplished by utilizing every opportunity possible for working in connection with a school lunch-room, or by making articles to be sold. Again, the need of repetition

in the practical work is keenly felt by those teachers who are working for efficiency, and this will necessitate a change in the course of study.

Current thought in the world of education is also having its effect upon the household arts work, working with these other elements in the situation to produce a change in method. The idea that we must give to the pupils what will function in their own lives is applicable in the household arts field. The household arts teacher will seek for opportunities in the life of the school to make the work real; coöperation, for instance, in school entertainments which form at present so large a part of school life. Indeed the whole course will be planned with the thought in mind of what the pupil herself needs and what she can take to the family rather than from the point of view of applying science in a neatly arranged and more or less logical course. The teacher of the household arts has never before had such an opportunity as now presents itself in our great cities and in the rural communities, if she can free herself from her own preconceived ideas and throw into the waste basket the course of study that was useful in its day but is no longer worth while.

SOME RECENT EXPERIMENTS IN THE TEACHING OF FOODS AND SANITATION

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The one-time "cooking teacher" is a personage of the past. In the fore ranks of education today stands her successor—the broad minded teacher of household arts, inspired by sympathy and stimulated to effective service through an appreciation of her opportunities in a constantly widening field.

The woman who enters this field of service must possess courage, initiative, faith, and the spirit of experimentation and adventure. Occasional failure and frequent disappointment must be welcomed as building stones in the structure which is growing under her hands. She must know that her success will depend upon her ability to realize the needs of those whom she serves and, given this, upon the power to meet those needs with sanity and sympathetic wisdom.

Fortunate is the teacher of foods and sanitation who is *willing* to

venture and is *free* to do so. She will discover that her laboratory is unbounded, that her subject matter is limitless, and that each day may be an enthusiastic excursion into new and interesting fields.

Many agencies are already well established which serve to unify and vitalize the numerous avenues of work which teachers of household arts rightfully claim as their own. The Camp Fire Girls movement has cast a romantic glow over many of the simple home tasks through honors, rhyme and song. The canning clubs, first established by southern enthusiasts, have dignified certain forms of work and have given it a money value. The Housekeeping Centers of New York City, established and directed by Miss Mable Hyde Kittredge, have successfully demonstrated the possibility of duplicating the home in the school. Credit for home work as developed in numerous communities throughout the country has very successfully effaced the barrier between the home and the school.

The papers which follow are brief statements of experiments in the teaching of foods and sanitation. They have helped to vitalize the work as handled by these teachers; and although they make no specific claim of originality, they are offered as possibly suggestive in their adaptation. The first is an account which Miss Mary Elizabeth Pillsbury has written of work done at a neighborhood house during her senior year in the Household Arts Education Department of Teachers College.

It all came as the result of asking this question: "How can these boys and girls be made to want all that there is for them in the household arts treasure box?" The four room flat which the boys and girls called *home* was the answer to that question.

A cooking teacher was needed in a Settlement House on the upper East Side. The people in that district were either Italian born or of parents who were born in Italy. The houses were typical of the tenement districts, three and four box-like rooms being made to house large families averaging seven or eight each. The Settlement House itself was a substantial three story frame house.

Here, one evening in September, on the top floor in a small room six Italian girls came together to learn to cook. The equipment consisted of a sheet iron gas range with two burners, a few utensils, a long table and cold water supply. That was in September. By the end of January, necessary additions having been made to the equipment from time to time, we had covered in our weekly meetings typical

breakfast dishes, candy making, and cake making. As for the cooking of food the work was progressing smoothly. But that was a small part of the household arts treasure store; the serving of the prepared meal the care of the dining room, the selection of food, care and storage in the home, home sanitation, and many other problems had to be passed by with a few words. In our one little room we could do nothing with these vital problems.

A flat of three or four rooms, in the district in which the boys and girls lived seemed to be the necessary thing. It would be a "home" where we, as a big family would naturally enter upon the activities of the home—cleaning, washing, ironing, sewing, mending, cooking, etc.

After careful figuring, the amount of \$200 was found to be the lowest estimate for furnishing and repairing and for three months' rent of a suitable four room flat. The Settlement promised \$100 and the rest was secured, either in money or furnishings, by personal letters.

In selecting the flat, light and air were considered but much interior painting and tinting had to be done in order to make the place desirable. Much of this work was done by the boys and later they stained the furniture which was purposely bought unfinished. The kitchen equipment was placed by the children, necessary shelves put up, and the home gradually put into running order. No boy or girl is admitted to a cooking class unless he or she has on an apron. The boys cut out and made their aprons, using the style that the butchers wear. One teacher said, "The boys think they are being taught to cook, but we think we are teaching them to be clean." Five of the six boys in one class have been persuaded to take a bath and clean up before coming to the class. The care of the hands is being insisted upon and with the help of rose water and glycerine, which is distributed in small bottles, the rough black skin has given away to smoother and cleaner skin than was ever thought possible. All this has been accomplished in the name of "cooking."

For a recent exhibition the boys made 350 doughnuts and made and served waffles and coffee for 50 people; the girls made 50 cup cakes, 2 pounds of fudge, and 2 pounds of butterscotch, and made and served 7 quarts of peach and apricot marmalade. The sum of \$4.11 was cleared after all expenses had been deducted.

We hear of lack of interest in certain mechanical processes, so essential in the training of the thorough housewife. Miss Florence

E. Winchell, Director of the Department of Domestic Science, Ethical Culture School, New York City, tells in the following statement of the satisfying results of a cleaning contest.

The cleaning lesson is an absolute necessity in household arts work irrespective of the age of the pupils. Distaste for such lessons is due principally to the disappointment felt by the girls when they find they are not going to cook. Certainly such an attitude is dampening to the ardor of the sympathetic teacher, for so much of the pleasure in school work depends upon the team work between pupil and teacher. The cleaning lesson often seems to need something to clear the atmosphere and set an attractive goal for the group to work toward.

The success resulting from contests in bread making, corn raising tomato canning, etc., prompted us to put a cleaning lesson in two seventh grade classes in the Ethical Culture School upon the contest basis. The two classes worked at the same hour in adjoining laboratories. The choice of judges, one from each class, was made entirely upon the reputations of the children for good judgement and fair dealing. Each judge was given a score card and asked to mark every girl in both classes on each point. They worked independently and at the end the scores were averaged.

After a brief discussion of the score card as typical of the requirements made by employers of all kinds of help the groups went to work. Such vigor, such businesslike attitude, and such results were unprecedented. With those particular classes the scheme worked like a charm. The difficulty came in getting the classes to leave the laboratory. The completion of the score cards depended upon the finishing of all the work and held up the final report. However, no engagements were pressing enough to prevent their waiting for the decision of the judges. The decision was accepted gracefully by the girls of both groups. In the score card used the division of points was made as follows:

Manner (animation, vigor, quietness), 25; method—speed 15, neatness 15, handling of material 15; result—cleanliness 15, order 15.

The debate described by Miss Amy Logan, teacher of foods and sanitation, Horace Mann School, New York City, is suggestive as a means of strengthening interest and research in vital food problems. Miss Logan writes: The domestic science class in the sophomore year of the Horace Mann High School was recently using a can of tomatoes to make a sauce. The class had already canned vegetables and put

up preserves, and as one girl opened the tomatoes she said; "I wonder if they are as good as ours. Is it better to put them up at home or to buy them?" Another remarked that this sounded like a "debate question." Whereupon they asked the teacher if the class might debate the point. Consent was readily given. A girl was selected to act as president, who stated the question: "Resolved, that foods canned at home are better than commercially canned goods." Four girls volunteered for the affirmative, four for the negative, and a lesson period two weeks ahead was set as the date. The teacher suggested several books and magazines for use as reference and placed copies in the school library. She then consulted the English teacher who kindly offered to coach the class in the formalities of debating, but used other subjects as illustrations leaving this one for the girls' independent effort.

On the appointed day the president chose a time keeper and a secretary while the remaining members of the class acted as judges. The speakers quickly warmed to their subject and discarded their rough briefs; indeed, the interest and excitement became so intense that time was called on several of the debaters and the president was obliged to call order to prevent the judges from joining in the discussion.

The points advanced by the affirmative were: better flavor of home products, individual preferences, assurance of purity, and the housewife's control of sanitary conditions. The negative contended that commercial goods generally cost less; that they save labor in hot kitchens, that they are always procurable at the grocer's, that the large canneries with modern equipment secure better sterilization than is secured in many homes, and provide perfect cleanliness. (Example, the Franco-American establishment which many of the class had visited.)

This last point wrought the downfall of the negative, for in the rebuttal the leader of the affirmative with fine scorn declared that if a "housewife did not care to keep her kitchen clean and allowed kittens to play about, she deserved to eat grocery-store mince pies!"

Altogether it was an excellent lesson. The girls felt the responsibility for its success and since they had suggested holding the debate and were free to develop the material they were on their mettle before the judges. Also their interest in the canning industry, that big phase of our modern food conditions, has been thoroughly aroused as shown by the bits of information often brought to class—information that would have made fine points in the debate.

The cost of living in New York City is perforce one of the dominant subjects for discussion in the homes of many families. In order to personalize the work of the Eighth Grade at Speyer School, during the current year the following scheme has been developed: A typical family, Mr. and Mrs. Knickerbocker, and their children, Mary aged 12, Hans aged 8, and Betty aged 2, have moved to New York City from Connecticut. Mr. Knickerbocker is a salesman, earning \$1200 per year. Under the following problems the work of the year has progressed.

What must Mr. Knickerbocker's salary pay for? How can he and his wife divide it so that they can pay the bills and still have some left for a rainy day?

What can Mrs. Knickerbocker do during the summer, while visiting her mother on a Connecticut farm, that will help to keep the grocery bills lower in winter?

How can Mrs. Knickerbocker know which foods will give her family what they need for health and growth? What are Mrs. Knickerbocker's hygienic responsibilities?

How do Mrs. Knickerbocker's simple tastes in dress and house furnishings affect her laundry problem?

How much shall the Knickerbockers spend for Thanksgiving dinner, and what shall they have? Preparing for the Christmas holidays—Grandmother and Grandfather to be guests. "The fire of hospitality in the home and the glow of cordiality in the heart." Mr. and Mrs. Knickerbocker entertain very simply in the evening. What shall they serve?

The planning of the meals. Mrs. Knickerbocker finds that eggs are growing cheaper and taste better. How can she use them in her meals? What other food may she serve that will help to keep down the meat bill and still give her family enough protein? Using the "left overs" as a means of keeping down the grocery and meat bills.

Shall Mrs. Knickerbocker bake or buy her bread?

Betty is in her "second summer." What can the mother do to keep her well and happy? (Demonstration of bathing and dressing of babies.)

Hans' birthday. What shall his mother serve at his party?

Under each problem as stated the practical processes connected with foods, their selection, their preparation and service, cleaning

and laundry work are taught. In a course on "The Home" during the second half year, the actual rejuvenation of the roof-room at Speyer furnished the basis for the discussion of art, comfort and sanitation in the home.

A bread contest among the girls of the seventh and eighth grades followed the lessons on bread making. The bread was made at school by the girls, was judged by three members of the staff in the Foods and Cookery Department, Teachers College, and was served with cakes and cocoa at the parents' meeting, at which time the results of the contest were announced.

Is it not helpful for teachers to read of the adventures of others in this new and fascinating field? There is true inspiration in the realization that the work calls for more than serious, plodding, daily duty; that it demands originality, spontaneity and adaptability to environment.

THE NEED OF HOME ECONOMICS IN EDUCATION

[The importance of Home Economics is discussed from different points of view in the pages which follow.]

HOME ECONOMICS AND HIGHER EDUCATION¹

ABBY L. MARLATT

Higher education has been so long dominated by the study of the humanities that we now find opposition when there is an attempt to increase the number of the subjects which are supposed to give moral and intellectual discipline, to elevate and humanize the student. The question comes, not does the study of the newer subject widen the view but is it honored by custom or is it so far divorced from daily use that the perspective softens the crude outline and allows us to read into our half seen picture the imaginative ideal that stimulates speculation?

After all why should a few centuries or decades between us and the topic make so much difference in the moral and intellectual outlook gained? Can we not gain in power and breadth of view, providing we pursue the subject intensively and also broadly?

¹ Extracts from papers prepared by Abby L. Marlatt for the Second International Congress for the Teaching of Household Economics, Ghent, Belgium, and for the Home and School League, Philadelphia.

Are food, clothing, shelter and family, when studied through Greek and Roman History cultural but when studied in relation to our city slums or country villages utilitarian and therefore uneducational? If time has such a refining influence in separating the gold from the dross, then time is the true alchemist. In future ages the study of Home Economics will rank as pure gold in the education exchange, for the present home will be archaic and therefore divorced from use and a subject of speculation. Even now it is difficult to determine what may be history and what may be the tool of tomorrow's labor. All Home Economics courses confront the shifting of social standards and therefore it means that the "do" of today becomes the "history" of tomorrow. Over night our pet theory becomes another "hypothesis that does not work." Little of our knowledge has the exactness of mathematics. Each day sees some new discovery which makes the explanation of yesterday impossible. That is the joy and the sorrow of the student whose mind is open. We sigh for "dead languages" that are so quiet in their repose and need only to be excavated with care. To study where every tomorrow may explain the unknown of yesterday, that is the joy of the explorer.

The broadest education for the woman who is to make the home of the future must have as its center the training in that body of knowledge called Home Economics if it is to be most efficient.

That the woman of trained mind is needed in the control of the factors of the modern home is voiced by Mrs. Richards in her book on the "Cost of Living." "The educated woman longs for a career, for an opportunity to influence the world. Just now the greatest field offered to her is the elevation of the home into its place in American life. * * * * The housewife who is worried by her servants, cheated by her tradesmen and is helpless before her furnace and her cook is still a savage—has not grasped the meaning of the environment which we call home."

The modern home is a laboratory for applied science where the effort should be for the maintenance of the physical well-being and for presenting the right environment which shall lead to perfection in the child's mental and moral development.

To manage this working laboratory with its water supply, its heating and lighting apparatus, its sewage system and its ventilation problems, requires more than ordinary sense. It requires an education in applied chemistry, physics, biology, botany, sociology, business methods and general household management.

There is no other profession which so bristles with unsolved problems, for instance: What industries may be removed from the home? What industries should be retained? What is gained or lost in utilizing public laundries, bakeries, housecleaning companies? What moral and economical problems are to be met in using ready-made clothing? Shall the helper live in the house or come in for certain stated hours? What moral relation is there between wastefulness in wealthy homes and false standards among the less well-to-do? Should the present kitchen equipment be sacrificed and the electric hotplate and fireless cooker substituted? Is there not greater economy in many homes having a central heating plant requiring the services of but one man? What should be the relation between the expenditure and the income?

None of these can be answered alike for all, and therein lies the difficulty and the pleasure in household management—it takes brains.

HOUSEHOLD ADMINISTRATION, HOME ECONOMICS AND DOMESTIC SCIENCE²

F. F. WESBROOK

These are terms with which we are all familiar and indicate that this generation is waking up to the need of special training for the most important work in nation-building. The successful making and keeping of the home is indeed a profession which requires the most careful training of women of the best moral fiber and the highest mental equipment. The housekeepers of our land are those who perhaps spend the bulk of the nation's money. Yet in the past there has been little in the way of careful training for this most important economic work. The home-keeper is not less important in our social development. We leave to woman very many nondescript duties included in the care of the home. She it is who knows all details of the children's physical and intellectual progress. She has accurate information about our schools. To her we turn when problems of civic house-cleaning and house-keeping arise through man's negligence. It is, therefore, most appropriate that at length we are providing practical as well as cultural training in order to enable woman to meet some of her obligations.

² Extract from inaugural address by F. F. Wesbrook, president of the University of Winnipeg. *Science*, n. s. xxxix, 1914, no. 1003, pp. 407-418.

Universities must train our leaders in women's work and provide facilities for research in the science of home-making and the art of housekeeping, if the word "*home*" is to remain current in the vocabulary, and this most important phase of our national life is to keep abreast of commercial and industrial progress.

THE HOME MAKER'S SCHOOL³

MARGARET STANNARD

The private schools, of which there are many in the United States, seem best fitted to offer instruction in home making. They have relatively small classes, freedom in the planning of work, and girls chiefly from families in which there is no economic pressure. These girls have little, if any, home training in this direction, and it is most important both for themselves and because of their influence on other less privileged classes. At the present time the private schools are doing practically nothing. The refusal of the private or endowed colleges to give credit for Home Economics is one reason for this, no doubt. Another is, that the private school itself cannot see much beyond the "trade" side of the work. To them homemaking means merely cooking and sewing. They fail to see that there is a home side to every subject taught, which would broaden, not contract, the field of culture. This fact needs but to be recognized by public and private schools to dignify the work and to make it popular with the best type of girls.

Meanwhile, special schools of home making are needed to supplement and extend academic training.

There are already a few such schools in the United States to serve as object lessons. These schools offer one or two-year courses to girls who have graduated from secondary schools or from colleges. They do not prepare for teaching or other wage-earning occupations, and are professional only in the sense that home making is a profession. Their aim is manifold: To save a girl the hardship of learning solely by her own experience; to save the family and society the waste of such methods; to make of every woman an intelligent coöperator in improving home conditions; to remind academic schools of their duty and to suggest to them ways of performing it.

³ Extracts from a paper prepared by Margaret Stannard for the Second International Congress for the Teaching of Household Economics, Ghent, Belgium.

In these special schools, all the work centres around the home. History becomes the study of the evolution and growth of the family as an institution, and of its relation to other institutions; home life at different periods is also studied as a revelation of its influence on the whole social and political order. Ethics becomes a study of family relationships and their corresponding duties; psychology and physiology are brought to the service of childhood, and the further responsibility for the next generation is emphasized by the study of eugenics.

Literature is discussed with reference to the choice of books for the home library, the various uses of books for inspiration, amusement, education etc., for old and for young. The principles of art are used in the selection of home music and pictures, and also in the building of the house, in its furnishing and adornment and finally in the selection of clothing for the family. Economics, combined with practice in buying and accounting, provides for the business side of the home makers work. Experiments in applied chemistry, bacteriology and physics furnish a scientific foundation for the study of food, of sanitation, of mechanical devices, etc.

The so-called trade side of the home maker's work, cooking and sewing, is allowed its due share of time, both for the illumination of principles and for the development of practical skill. The work of the modern home maker, however, is chiefly economic and educational, rather than industrial; she must learn to adjust values and to choose wisely for herself and for her family.

THE EQUIPMENT OF THE WASHINGTON IRVING HIGH SCHOOL

EDYTHE M. POWNALL

The Washington Irving High School, New York City, has been given many names—"the largest high school in the world," "the school of a thousand welcomes," "the school that is different," "the school with the go." It has deserved all of them, some more than others, and many factors have contributed toward making it worthy of them. Not least among these is the equipment for all the courses—the result of the thinking and planning of the heads of these courses during the long ten years before the present school building had actually materialized.

The idea of those who planned the building was to have certain floors devoted to certain subjects. Some floors are given up entirely to what we might call academic class rooms, while others have rooms designed for the technical subjects, with additional academic rooms for the academic subjects that the girls of those courses take. Thus we find the commercial work on the second floor, the domestic art entirely on the third, domestic science on the fourth, and science on the fifth. Drawing is concentrated mainly on the sixth, seventh and eighth floors, and shares the space with the music rooms, the chemistry and physics laboratories, and the regular recitation rooms. The gymnasiums, which accommodate every one of the five thousand girls twice a week, are in the basement, and on the fourth and eighth floors.

Visitors—and there are many—have varied purposes, but not a few come mainly to see the equipment, the fame of which has spread widely, particularly to those communities that are contemplating new school buildings of their own. Such a visitor is shown from cellar to garret, or, in terms of the Washington Irving, from the bright, welcoming foyer to the sunny, spacious roof. The foyer, with its pictures (the Washington Irving High School is a regularly constituted Municipal Art Gallery and already boasts of five different exhibits this year), with comfortable chairs and benches, and with smiling girls to guide the visitor over the building, lives up to the motto of hospitality engraved over its blazing fireplace. This fireplace is the pride of the young guide, who is loath to conduct the visitor away, even to the auditorium. The auditorium accommodates about fifteen hundred. From its gallery, lantern slides and moving pictures can be exhibited. The stage has dressing rooms and is equipped with four or five settings and drops. The Children's Educational Theater has used it frequently to present the "Prince and the Pauper."

The remainder of the first floor is taken up with offices, a book-binding room, fitted up with an imposing table and a printing press; the salesroom, in which the work of the art and domestic art and science departments is sold; and the library. Adjoining the library is the class room for the girls who take the library course. Here the young librarians find their desks fitted with racks for their black and red ink pens, and with small drawers to the side, for practice in card cataloging.

Only one room is needed for the library girls, for the number taking the course is small, but a whole floor and more is devoted to the rooms of the commercial courses. The second floor contains almost all of the

commercial work. There are stenography rooms with ruled boards and typewriting rooms with typewriting desks and desks that hold the mimeographs. In the bookkeeping rooms the girls sit on high revolving chairs, with the ledgers kept open by the brass clamps that hold them upright against the high back of the desks. On this floor, too, are the bookkeeping rooms and the bank—complete in every detail, with paying teller, receiving teller, bank book, deposit slip, and depositor.

The domestic art and the domestic science departments occupy the two middle floors of the building. The dressmaking girls are proud of their department, and grow attached to these rooms where they spend almost half of each school day. They will point out with pleasure the closets with compartments into which the sewing-boxes fit—or the wardrobes with the brass rods and “arms” from which the finished garments hang. At one corner of the room heavy brown curtains enclose a fitting room with a full length mirror and a stand for the hanging of skirts. The sewing tables are cutting tables as well. A wash basin, electric irons for pressing, and sewing machines complete the outfit of each sewing room, although in one there is also to be found a perforating machine, in another a hand loom, while a third is given over entirely to hand and power machines. The halls of the building above the main floors are lined with exhibition cases for the work of each department. In the domestic art department these are used largely for exhibits of laces, of embroideries and weavings of many countries, and of specimens of old time dress, precious relics of grandmother’s day, loaned to the department. An unusually complete exhibit of spinning wheels is worthy of mention, although it could not properly be called part of the general equipment.

The Domestic Science Department is concentrated on the fourth floor, and consists of four kitchens, an exhibition dining room, a laundry and a model apartment. In each kitchen is a series of marble-topped tables with drawers and cupboards, for the kitchen utensils of each cook. On this marble top at regular intervals stand the individual stoves, consisting of one burner with a detachable oven. The broiling and roasting are done in the large institutional stove which almost fills one side of the room. The remainder of the room is taken up with large cupboards and porcelain sinks. In connection with the cooking, the girls are taught serving in the exhibition dining-room, one of the most attractive rooms in the building. It is in the kitchen and this room that the domestic science students busy themselves for three

of the five months of the course; the other two are spent in the laundry and the model apartment. The laundry has twelve porcelain tubs, an electric drier, a large wash boiler, a small gas stove for the making of starch, and electric irons.

The model apartment is the pride of the domestic science section. It invites all to come and see how five rooms and a bath may make an artistic, an inexpensive and an efficient home—or at least, be the framework for such a home. It is composed of a bath, a kitchen, a pantry, a dining room, living room, bed room and a nursery. Not only are the girls taught economy of money and energy, and for that purpose are introduced to a kitchen containing a fireless cooker and a kitchen cabinet, but they are given lessons in decoration—in simple color combinations of wall-paper, hangings and furniture. The living room is supplied with three different sets of furniture—mahogany, craftsman and willow, the dining room with mahogany and craftsman, the bed-room with a white and an oak set. The paper of the nursery has a deep nursery rhyme frieze, the famous inhabitants of which look down upon a white iron crib, a shining white chest of drawers, a baby's washstand, and a low white rocker.

Many of course are the changes in curtains and hangings that can be made to suit these various sets, but to change the wall paper was at first a problem. It was solved by having the molding put on hinges. Thus it can be raised, different strips of paper tacked into place, and a new wall paper, calling plainly for a change in furniture, is the result. The living room and dining room can be thrown into one, and with the hangings between the two, the low couch, and the curtains at the windows, offer much opportunity for studies in materials, and in combinations of colors.

The floor above the domestic science department is devoted to the biology department. It contains a vivarium, supplied with specimens from the Zoölogical Gardens in the Bronx and has an annex on the roof in the shape of a greenhouse. In the botany room the desks are arranged so that the girls face each other. Thus they can work with the same specimen, although individual microscopes are used. Exhibition cases lined with mirrors, storage closets supplied with ice boxes and basins, a chart room, and a room fitted with a lantern and slides for illustrated lessons, are some of the features of this department.

Rooms so fitted out are also to be found in the physics and chemistry departments, in addition to their fully equipped laboratories. Such

rooms are at the disposal of any department that can use them, and are a distinct adjunct to the academic class rooms. These latter rooms differ from the average class room in their show cases, their filing cabinets, their many storage closets, and chiefly in their desks, which are not desks in the ordinary sense, but are tables with shelves underneath. The art department has developed a special variety of desk—one with places for pen, water and ink, and a movable top on hinges, which may be raised to any angle and used as a sketching board. In coöperation with the domestic art department, they have a costume design room, containing full length mirrors and blackboards, and desks which are arranged in a semi-circle, with a platform for the model in the center.

Music rooms like small concert halls, gymnasiums fitted with the newest apparatus, lunch rooms and rest rooms, complete the building and bring the visitor to the roof where he may rest and watch a rapid game of basket-ball, or where he may ponder, as he gazes over the city stretching out before him, upon the activities of the miniature city housed beneath him.

PUBLIC BATHS IN LARGE CITIES

THOMAS M. BEADENKOFF

Secretary of Public Bath Commission, Baltimore

On account of the universal lack of clean bodies and clean clothing, clean houses and clean streets and roads, the Black Death and other plagues found a soil ready for rapid growth. The Black Death visitation of 1348 is said to have carried away about one-half of the population of Great Britain. It is only within the last century that medical science has awakened to the value of simple cleanliness as the best defence against disease.

Slowly the idea of the need of bathing facilities in the home has grown and widened until in some localities, in American cities especially, there is ample provision for baths in the home. Unfortunately this is not the general condition. American travelers are well aware of the lack of baths in Continental hotels and the bath room as known in American homes is rarely found in the average city residence abroad. In the capital of Holland, The Hague, nine residences in ten are

without bathing facilities. The city of Amsterdam, with a population of 400,000, averages 27 gallons of water per day to each inhabitant. American cities like Chicago, Buffalo and New York, average from 150 to 200 gallons of water each day to each inhabitant. These facts indicate that the facilities for cleanliness in many European cities are too meager to insure public health. Many American cities are no better off in their older and congested sections. A government inspection, made some years ago in what were called slum districts of New York, Philadelphia, and Baltimore showed as high as 90 per cent of the population to be without bathing facilities.

For such neighborhoods public baths have been established in many European and American cities. The first one in Great Britain was built in Liverpool in 1842. Soon the idea spread to Dundee, and later to cities of the Continent. In America since 1890 most of the leading cities have established these baths and they are largely used. In 1911 New York City had twelve public baths containing 1377 showers and tubs and three pools. At a cost of \$336,000 for maintenance and operation, 3,581,846 baths were provided during that year.

In Baltimore in 1894 a group of philanthropic men and women, to meet the demand for a harbor swimming place, erected a few sheds on the beach; they were well patronized and for a few years the city contributed \$500 annually toward the erection and maintenance of these dressing sheds at three or four stations around the harbor. Each year 35,000 or 40,000 bathers used these places but the promoters of the plan did not forget that sanitary cleansing baths were more important than summer recreation baths and several meetings were held in connection with the Maryland Public Health Association in 1898 and 1899 urging the establishment of indoor cleansing baths for congested neighborhoods.

As a result of this agitation, there followed the generous gifts of Mr. Henry Walters who erected and opened the first Baltimore cleansing bath. Its value was immediately proven by a patronage, during the year 1900, of 70,000 persons. Since that date Mr. Walters has erected three additional bath houses in other parts of the city and these four indoor cleansing baths with one erected by Baltimore City in 1912 represent a total investment of \$200,000 for the health and cleanliness of the people.

It should be added that five public laundries are maintained for

men and women who have insufficient facilities for doing their personal or family laundry at home: these laundries are in the basements of the bath houses. In most of the Continental cities the public wash house is unknown, but in British cities it is hardly second in importance to the bath house.

Beside these five baths mentioned above, four smaller houses called "portable" baths are also used as part of the Baltimore system. These portable baths are set up temporarily at corner lots in needy or crowded sections and are supplied with hot and cold shower baths. In 1913, 74,500 persons used these houses.

The original work of the bath promoters twenty years ago has not been neglected and summer swimming and recreation are carried on at four other stations in the city: two in public parks and two on the harbor's edge.

The present status may best be understood in a brief extract from the last annual report:

In 1913 the indoor shower baths were used by 746,030 patrons, an increase of 92,000 over the previous year and the outdoor swimming baths recorded 301,924 patrons; an increase of 64,000.

This grand total of 1,047,954 patrons represents large benefits to many classes of the community: To the poor living in congested sections who find in the baths an opportunity for health and cleanliness convenient to their homes; to other thousands who use the public laundries where for a few cents the family washing, drying and ironing may be done outside the cramped quarters of their rooms; to the 300,000 patrons of the outdoor swimming baths which furnish clean and wholesome recreation in the beautiful public parks or at the harbor's edge; and to the bathers at two athletic recreative centers where in 1913, 104,000 patrons were recorded.

Another department of municipal work under the care of the Public Bath Commission is scarcely less important than any of the other four, namely, The Public Convenience Stations. By a fairly accurate count 861,000 persons used the two convenience stations last year.

The economy of management of baths and laundries, the freedom from political or personal influences in making appointments of employees, and the careful sanitary regulations have resulted in a large success of our bathing system which has given our city a national reputation in this department.

HEALTH HINTS FOR SUMMER

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Everyone looks forward to the summer time; some because of the pleasure they expect away from home at seaside or lakeside or in the mountains; others because, although they must stay at home, they will be more free than in winter, go out of doors more and "enjoy" life better. This is true at least in the temperate zones; as we near the tropics, however, the summer is dreaded; and almost everywhere it is dreaded for children a year old, for the "second summer" is supposed to be the dangerous one.

FOR THOSE WHO STAY AT HOME

Probably the most important health hint for summer time, for those who go away as well as for those who stay at home, is not a "hint" but a real knock down blow. It is this: the dangerous things about summer weather are heat and humidity; but the most dangerous is humidity; not the hot air but the dampness of the air. The next is that sun-stroke is not due to the sun shining on the head but to heat and humidity combined. The third thing is that the summer diarrhea so dreaded for young children is often not due to food, but to heat and humidity; and the last one is that if you must stay at home or keep your family at home or raise a year-old baby at home, saving your money to buy an electric fan will be the best summer investment you can make and will take away the need for many carfares, lemonade and ice cream charges; and will probably prevent sickness and even death. Every baby in our hot, humid towns in summer should have an electric fan. Why?

A great many surprising things are always discovered the moment we "go-look-see" as the Chinese motto runs. For hundreds of years, perhaps thousands, we have all believed religiously in sunstroke and covered our heads to prevent it; and we should have kept on indefinitely believing that the rays "baked our brains" if some one had not experimented to find out—using monkeys, of course, at first.

This is what was found out: a monkey in the tropics exposed motionless to direct sunlight without covering in the blaze of midday was usually killed in a short time perhaps half an hour. If his head

was well protected from the sun, but his body left exposed, he died almost as quickly. If however, his head was left exposed but his body was incased in a box through which a circulation of cool dry air was maintained, he survived indefinitely. Why? Because when wholly exposed to the sun or exposed all but the head, the monkey suffered from heat stagnation due to the heat of the sun preventing the escape of the monkey's own body heat through his skin; and the humidity of the monkey's own body, surrounding him like a blanket, only made this worse. When his body was incased in a box, and his own heat and humidity were removed constantly by cool dry air, the fact that his head remained exposed was of little importance.

So also men confined in an air tight room soon began to suffer badly from headache, general weakness, etc., the results of "bad ventilation." They were allowed to breathe outside air brought to them through tubes directly to their mouths. This did them no good: then others who were outside were allowed to breathe the foul air from the box; this did them no harm. What, then, was the reason the men inside suffered from headache, etc? The answer is again, heat and humidity; simply their own internal heat and their own external humidity lying around them like a blanket in the still air of the room. Turning on a strong electric fan, so that this blanket of hot and humid air next each man's skin was removed, greatly improved their condition without introducing a single particle of new air into the room.

Remember to go into this summer, whether at home or away from home, with a firm determination to avoid heat and humidity all you can, and, if you cannot alter the heat and humidity of the general atmosphere, to keep the humidity and heat immediately surrounding your own body down to the safety mark. This means wearing light airy clothing and as little as possible of it: it means also circulation of air, moving yourself about if you cannot move the air. Most people have noticed that sitting still in summer on a windless day is really worse than doing something, because, in part at least, any sort of movement from place to place tends to leave behind you your own heat-and-humidity blanket. Not only discomfort and sickness but even death may be prevented by acting upon this knowledge.

Of course, it is true that all exercise will increase your own output of heat and humidity. Do not imagine for a moment that active exercise while standing in one place, especially cooking or washing clothes, will remove your own heat and humidity: it will only make it worse. A gentle walk, however, will tend to cool you off because,

although the heat and humidity you generate is increased, the air you pass through tends to remove it faster than before, provided always that the air itself is less hot and humid than your air-blanket.

Children, especially little children, should be kept out of doors in the shade if there is even a breath of wind stirring; and babies should be almost free from clothing. But remember that sometimes the outside air will be hotter and damper than indoors and if this is so, indoors may be better than outdoors especially on windless days and far better than outdoors sometimes if you have a fan running indoors.

Cooling drinks are good so far as they go; but the more you drink, the more you will sweat: sweating, it is true, cools off the body, on days when the humidity is low enough to permit the sweat to evaporate; but when the general humidity is high, sweating results in a layer of moisture forming on the skin, that will not and cannot evaporate because the air-blanket close about you soon becomes completely full of moisture and can take up no more. Even then, however, a current of air will usually remove the moisture, although sitting in still air will leave you surrounded by it. You must have noticed how you feel as if plunged into an oven when you suddenly stop walking or running on a hot, humid, windless day; although the walking or running made you sweat and suffer, yet standing still was even worse; all because of your own heat and humidity collecting about you.

In summer time, iced water in moderation does no great harm: taken slowly, a sip at a time, it is a great relief often as a cooler; but for relief of thirst, water that is not iced is really more efficient. Ice cream is better than water to cool you off if you take it slowly, because there is not so much bulk of water in it to get rid of later. It is sometimes claimed that cream and sugar and meat are objectionable in hot weather because they "heat the blood." Perhaps "heating the blood" may be a way of saying something that means that they furnish heat to the body; but ordinary diet is partly for that very purpose and you cannot do without such internal heat any more in summer than in winter. Curiously enough, meat which is looked upon as "so heating" is no more so than bread or other starchy foods or sugar, while fat is twice as "heating." Moreover both starch (and sugar) and fat burn up more quickly in the body than meat does. The habit of abandoning meat in summer for bread and such things is not based on sound principles. Children need protein to "grow on" as well as merely to repair waste. All an adult has to achieve is the latter. Children are very active in summer, and need nourishment in sum-

mer, to repair waste and also to grow on, just as much as at any other time. Better to feed them well and then see that any surplus heat so generated is properly removed than to starve them, merely to keep them cool.

Bathing is a splendid way to get rid of extra heat. A restless irritable child, suffering from heat and humidity can often be greatly relieved by stripping off all its clothes, turning on the fan, or giving a cool bath, not cold, of course. Sponging off is a great relief also; but in humid weather, the child must be rubbed dry after it, otherwise the layer of water left on the skin, instead of cooling the child, adds to its own heat and humidity.

The Care of Babies. The care of milk for babies is always essential all the year round, but especially so in summer. It is not only that germs grow faster under summer conditions, but also that every little thing wrong with the milk is made far worse in its effect on the baby because the baby is already suffering from the heat and humidity.

Remember, especially, that only mother's milk is fit for babies under one year old. Eighty per cent, of all babies who die, are babies whom people try to "raise" on something besides mother's milk. If you are forced to use something else, do not take advice from the neighbors but get the best scientific advice you can, from the best baby doctor there is available, on how to make the poisonous foods that you must use do just as little harm to your particular baby as possible. Remember that some forms of summer diarrhea are infectious, due to germs, just as is typhoid fever. Such germs may be carried by flies; also by fingers and milk, food, etc. In such cases all the precautions necessary in nursing typhoid fever should be employed to prevent the spread of disease. All milk should be kept cool, and usually it should be pasteurized.

Heat, humidity, poor feeding are the things to guard against. If you get good milk and have it modified to suit the baby, you may still feed it too much or too little or at the wrong times, etc. You will see why the man was at least partly right when he answered the question. "What kills babies?" by the one word, "Mothers."

FOR THOSE WHO GO AWAY

For benefit of "health," mental as well as physical, good food in plenty, a comfortable bed, and the chance to be out of doors the whole time, day and night, constitute ideals that all should seek. This means

sleeping out of doors, in the open, under the stars, in good weather; under a shelter, if you must, in bad. All who can be away for a week or more will enjoy this immensely, but it is hardly worth doing for a few days' stay, if you must sleep indoors on your return. It is wise to wear some kind of night cap at first, as well as a warm nightdress; and an extra blanket should be ready for use towards morning.

For avoidance of disease, the chief thing is to avoid association with infected persons in any such way as to receive from their infected discharges, directly, through mouth spray, sputum or hands, or indirectly, through water, food, flies, milk or the like, contaminated by mouth spray, sputum, hands or any bodily discharge.

How can you tell what people to avoid? Of course, if you go to your own cottage, among your own friends, you will know pretty well what to expect. But if you must stay with many strangers at a hotel or summer resort you must, as a rule, take chances more or less, and learn by general observation and "gossip" what persons are or have recently been ill with an infectious disease. The best defences you can organize, short of identifying the dangerous persons, which, of course, is pretty difficult in many cases, are connected with avoiding as far as possible, the mouth spray of strangers, or the handling by them of food, etc., that you intend to eat. The use of common roller towels, common drinking cups, etc., of course, is or should be, out of the question.

The water supply should be from unquestionable sources. If a well, it should be a well with a good curb (flooring around the pump), tight, so that water falling back on it does not wash down again into the well; and built up above the surrounding ground so that rains, do not run under the curb edge into the well. In limestone districts, surface wells are all under suspicion, and it is safest to boil the water from such. If the water comes from the public supply of a town or a city, careful inquiry can usually determine whether the water supply is exposed to sewage contamination or not. Some cities are notorious for carelessness in drinking sewage. If the local residents like sewage that is no reason why you should spend your summer vacation there. No community where typhoid is prevalent is any place for you to visit.

The milk supply should be from tested cows, and milked by clean, careful people. If a few of the women visitors at a summer resort will take an afternoon off together to see where the milk supply comes from, they will find it pays them wonderfully to do so, and they will learn, usually, some very surprising things. If you are uncertain about

the milk, scald it. Remember that "summer people" are often considered legitimate receptacles for anything in this line that is of no use to anyone else.

Flies in the kitchen and dining-room should be reason enough for a determined presentation of the case to the resort authorities, but flies in the kitchen or dining-room, *with unscreened outdoor toilets in the neighborhood*, are reasons in plenty—one reason to each fly—for promptly settling your bill and moving on. Summer vacation is no time to eat other people's bowel discharges with your food.

As to the food itself, the cooked foods are practically safe unless they are served cold or cool enough for flies to walk on them. But uncooked foods, bread, sugar, milk, cake, celery, radishes, lettuce, etc., are always ready to carry fly infections or infections from mouth spray and hands.

The cook's hands should be clean, and the vegetables should be washed and handled *after* the cook's hands are washed, not *before*, as very often happens.

Mosquitoes in some localities are a fearful nuisance: and the malaria mosquito may of course, inoculate you with the disease. The safest way to avoid both nuisance and danger is to keep away from where the mosquitoes are. This will encourage the local people to get rid of the mosquitoes so that the summer visitor will go there.

People often think there is something they can take that will prevent them from catching infectious diseases from other people, and they ask in confidence for "the secret remedy" which physicians are alleged to use for protecting themselves in visiting tuberculosis cases, typhoid, etc.; of which it is supposed they will not tell the public, lest disease be too much reduced thereby.

There are two such remedies available; for smallpox, vaccination; for typhoid fever, anti-typhoid inoculation. The former protects against smallpox for five years, the latter against typhoid for two years. Some day, when infectious diseases are properly looked after, neither will be needed. Even today, when we know where the infectious persons are, we can take precautions against them that make protective vaccinations unnecessary. But in some communities typhoid fever (perhaps the chief "summer vacationists" disease) is so common that your cook or milkman or vegetable man may be a convalescent or just coming down with it or even a "carrier;" and anti-typhoid inoculation for summer vacationists before they leave home has been seriously advised by some authorities. Quinine is a fair preventive for

malaria, but keeping away from malarial districts is a much better one.

In certain cities the autumnal increase in typhoid fever is unquestionably partly due to returned vacationists, developing the disease when they get back to work, for typhoid, as a rule, does not show even its earliest symptoms until two weeks after the germs enter the body, and usually another week at least elapses before the patient is sick enough to go to bed or call a doctor.

The wise summer resort keeper is he who will have his place, his food, milk and water supplies, and his help, properly inspected before the season opens. This is good business, as well as being the act of any good citizen who wishes to do legitimate trade and give his customers safety as well as a "good time."

In considering the relative importance, to the summer vacationist, of the different items here listed perhaps the most serious source of trouble (at least from typhoid, dysentery and other intestinal troubles) is the open, non-flyproof, outdoor toilet; the next, close association with convalescents or sick persons, especially indoors; the next, contamination of milk and drinking water; and last, the contamination of foods. In any one place, of course, the local situation may make one or another factor outweigh all the rest.

THE NEED OF TRAINED ASSISTANTS IN THE HOME

MARY V. SHAILER

It is important that the possibilities in this new form of service be outlined and it is still more important that the plan be tested in an experimental way in as many localities as possible. Bringing the work and the worker together with satisfaction to both will be the difficult part. The Household Aids Company of Boston some years ago did an admirable piece of work along this line and the report of the experiment which was written by Mrs. Richards will be reproduced in an early number of the *JOURNAL*.—*Editor*.

The home of today is greatly in need of assistance from the outside in the form of young women who have been trained in housekeeping, decorating, sewing, caring for children, and secretarial work. Can we standardize and coördinate these lines of work and elevate them to a plane which will attract our young women and girls?

¹ Extracts from a paper presented at the annual meeting of the International Child Welfare League, New York, May, 1914.

The greater activity of women in business, philanthropic and social affairs, calls for a system of easily obtainable assistance for the household, to come at call by the hour, or, to be regularly engaged at intervals. Increasing apartment and hotel living, higher rents necessitating economy in the size of apartments, and the higher cost of living making the waste of unskilled labor a matter to be reckoned with, together with the greater personal demands made upon the housekeeper for lack of permanent service, have changed methods of housekeeping and brought about new conditions.

"Efficiency methods" and "labor saving devices" are slogans of these newer conditions, and the home turns to the student of Home Economics for information and help. Can we make use of this need in the home, and the need of the young woman, and acting at a psychological moment, bring the two together?

The Proposition. To offer to young women and girls who expect to go into factories, shops and offices, special training in the vocations so essentially those of women, so wholesome, and so much more remunerative than those of factory or shop. These activities may afford opportunity for self-improvement and an uplift of ideals to the girl by reason of her intercourse with refined people in their homes.

The vocations are dignified, and many of them would command good pay while the training in Home Economics would be the best kind of preparation for the future homemaking of a girl.

Training in Home Economics would reveal her fitness for the work most to her taste and ability. The domestically inclined girl would choose the subjects under housekeeping; the artistically inclined, decorative art; the girl loving little children could be advised to prepare for the "student nurse;" the girl liking to care for the sick would learn convalescent nursing. If secretarial work were preferred, the girl should also specialize in some department of Home Economics, thus making herself acquainted with more than one field.

The factory offers but an incessant grind of machinery, a deadly monotony of toil, while a life of going from house to house offers possibilities for varied exercise and opens up a new world of experience and new opportunities. If the girl were capable and efficient, she would make friends of real value to her in her patrons. She would find change and variety in her various duties.

The Advantages to the Patron. In the stress of a busy life, in case of a slight illness in the family, at times of entertaining, or at the busy seasons, an efficient and tactful young person who performed

her task quickly with intelligence and system, should be a boon to a busy house mother or a weary business woman. In cases of emergency as when the home maker is temporarily ill, she may need a little nursing, a letter written, a book chosen at the library, the children bathed and taken out for air, a little mending at the stocking basket, packing done, flowers arranged, afternoon tea served, special arranging of furniture, a guest chamber prepared for an expected guest, an invalid read to, an elderly person cared for, etc. The business side of the proposition should attract the house holder because of the saving in cost of feeding, and in the rent of one less bedroom, both of which are to be considered with the present "living in" assistance.

Lodging. For the young girls who do not live with parents and are alone in the world, homelike boarding houses conducted by women of motherly years, capable of running a home for young girls, should be opened. (Here is work for dietitians who prefer home work.) In some parts of cities dwelling houses which could be utilized for this purpose have been left in business sections. Boarding homes could be opened in suburbs, and young students sent there from schools of preparation. Women's clubs should find practical work in opening a boarding home for the graduates from city schools.

Sources for Training Already at Hand. There are many high schools and various colleges and institutes, as well as classes in settlements and church schools where courses in some of these vocations can be taken to supplement that of the elementary school until our school system establishes its vocational schools. Day nurseries could be used as clinics for training student nurses.

The movement should be so organized, and the vocations so standardized and coördinated that there would be no confusion with the service of employees now living in the homes. This proposition is strictly for *visiting vocations*.

Suggested Plan to Form a Test Group. A group of ten or more young women, preferably college or high school graduates, to be formed, who are already qualified for work in some of the fields outlined. These young women while working out the plan should not be obliged to be entirely self-supporting.

There should be centrally located registration points at which applications for assistants would be received.

Patrons should be secured through private mailing lists.

A rigid investigation of all unknown applicants for a visiting student would be a necessary safeguard for the young girl.

A schedule of prices for each kind of work should be printed for the benefit of both patron and assistant.

The test group should be united by a common interest and an "esprit de corps" to succeed. Each girl should be chosen for her skill in her own specialty and for her tact. A common meeting place or club room should be arranged for where experiences can be discussed for the sake of gaining help from one another. Patrons should be requested to consider the movement from a business point of view and to treat the labor in that light. In the course of the consideration of this proposition the writer has found a demand for the service, and many young women ready to give it.

HOME CANNING

GRACE E. STEVENS

Department of Household Science, University of Illinois

The great problem of food preservation is to prevent spoiling and yet retain the full food value and the original or a desirable flavor.

The needs for food preservation are many: to prevent the waste of the season's fruits and vegetables; to extend their period of use with the least expense; to make possible an increase in the consumption of these foods which supply the needed mineral matter and bulk to maintain good health; to preserve food in a form easily transported; and to give variety to our all too often monotonous winter diet.

Each kind of the organisms, bacteria, yeasts and molds, which occur on all fresh food material and cause its decay, has its own preferences regarding food. Bacteria do not like sugar, nor do many of them like acid. They prefer protein-containing substances such as milk, eggs, meat, corn, peas etc. Therefore we find these foods spoiled most largely by bacteria, some varieties of which produce the seed-like forms, spores, which are very hard to kill. Yeasts prefer sugar and are not affected by weak acids. They, therefore, spoil our fruit juices. Both yeasts and yeast spores are easily destroyed. Molds grow on surfaces such as jelly, bread and fruit, but are readily destroyed even in the spore state. Since these microorganisms are plants, they require the conditions favorable to plant growth—food, warmth and moisture. The reaction of the material canned, whether acid or alkaline, has a decided bearing on the temperature at which microorganisms are

killed. This is illustrated by the ease with which fruits (acid) are canned as compared with vegetables (non-acid).

The methods of food preservation are classed as physical or chemical. Cold storage, high heat, exclusion of air as in coating eggs or sealing jellies, and evaporation as in the natural drying of grains, vegetables and fruits, represent physical means. Salt, sugar and smoke represent chemical means generally conceded to be harmless, while such chemical agents as borax, salicylates and canning powders are not to be commended in foods.

Canning is often a tedious process because thought has not been given to previous preparation. Cans, rubbers and covers should be looked over before the season opens and the necessary additions and subtractions made. There should be paraffin, corks for bottles and plenty of labels on hand. Then comes the beginning of the process which consists of buying the product to be preserved unless the home garden or orchard is the fortunate source of supply. The cost will be least and the quality of the materials best if large quantities are purchased during the prime of the season. The careful selection of good fruit that is neither over ripe nor decaying, will simplify the work and avoid great waste. The best portion should be used for canning and the poorer be made up into fruit butters or jams.

Vegetables require even more careful selection as they are hard to preserve at best. They will sterilize more easily, be much sweeter, and more delicate and juicy if they can be obtained fresh from the garden, while they are still young and tender. It is a commonly known fact that such vegetables as peas and sweet corn rapidly lose their sweetness after gathering because the sugar is in part changed to starch.

That these products may be canned under the best possible conditions, it is necessary to have the air and the canning room free from dust. The dishes used and the fruit cans should be thoroughly clean. No tin or iron ware should be allowed, since they are attacked by acids. The whole principle of canning is to kill by heat all bacteria, yeasts, molds and spores present and keep out all others. The result should be complete sterilization. One remaining microörganism can spoil a whole can. The can rubber serves as the seal against admittance of germ-laden air, and so it must be thick and flexible.

Fruit is easy to preserve because bacteria are easily killed in the presence of the acid. Then, too, fruit bacteria are not ordinarily spore

formers and are for that reason easily destroyed. A few fruits such as cranberries, rhubarb and gooseberries are so acidic that they can usually be kept by mere submersion in water.

The fruit should be carefully prepared. All spots and bruises should be removed as these make sterilization more difficult and detract greatly from the appearance of the finished product. If using thin skinned fruits, a minute's scalding in boiling water will cause the skins to slip off easily. If necessary to prepare the fruit faster than it can be canned, it should be kept from darkening by dropping it into water made acidic by the addition of lemon juice or vinegar.

The most common methods used for cooking and sterilizing fruit are the open kettle, the steamer, the oven and the fireless cooker. In the open kettle method, the fruit, preferably a small amount, is dropped into boiling syrup and cooked until tender. While still boiling hot, the material is filled into cans previously sterilized by ten minutes boiling. When these are full to overflowing, a cover and rubber, also sterilized, are adjusted and the can tightly sealed. In the steamer method, the fruit is carefully arranged in the cans as fast as prepared and the syrup, hot or cold, is poured over it to fill the can. The covers are adjusted, usually loosely (though many screw them tightly without resulting harm), and all are placed in a commercial steamer or an ordinary wash boiler containing cold water and fitted with a false bottom of pierced metal supported by strips 3 or 4 inches high. The cover is fitted on and the water brought to a boil and kept there from thirty to sixty minutes according to the fruit. If the cans are filled with hot syrup to make up for shrinkage, steam must again be applied for ten minutes. Then the covers, if loose, are tightened and the cans are allowed to cool. In the oven method the cans of fruit are prepared as for the steamer and then placed on asbestos sheets or in shallow pans of water in a moderately hot oven for twenty or thirty minutes. In the fireless cooker method, the filled cans are sealed, placed on a false bottom in a kettle containing water, boiled for ten or fifteen minutes and then put into the cooker, water and all, to finish.

The above methods have been carefully compared as to cost, convenience and results.

Cost of Gas

Open kettle: 1 medium sized gas burner on half for 30 minutes = \$.0045. This divided by 3 (quarts) = \$.0015 per quart.

Steamer: 2 medium sized burners on half for 40 minutes = \$.006. This divided by 13 (quarts) = \$.00046 per quart.

Oven: 2 oven burners on half for 30 minutes = \$.009. This divided by 14 (quarts) = \$.00064 per quart.

Fireless cooker: 1 medium sized burner on full for 10 minutes = \$.003. This divided by 2 (quarts) = \$.0015 per quart.

This last method is useful and convenient for small quantities only.

The drawbacks to the open kettle method are that constant attention over a hot stove is required, the fruit is likely to become broken and valuable flavors volatilized; there is greater danger of spores falling in before the can is properly sealed and the hot cans, which must have been previously sterilized, must be handled more than in any other process. The oven method is considered easiest by some, but it requires much attention and causes most shrinkage in the can contents. The steamer method seems to lead with most favorable points: besides those evident from the above statements there are the advantages of plenty of water below to prevent burning; and the improved flavor and appearance of the product, since the cans need not be opened nor the fruit disarranged in any way after the first filling. There is a distinct advantage in filling the cans when cold with firm and comfortably handled fruit. The latter methods allow the putting up of from twelve to sixteen quarts at one time, depending upon the size of the oven or steamer. This decreases the fuel cost and the time and labor per can. If a range is employed, both methods can well be used simultaneously.

Syrup for sweet fruits requires two cups of sugar to four of water; for sour fruits, two cups of sugar to two or three of water, but too much sugar spoils the natural flavor of the fruit. Long boiling of fruits in syrup decreases its sweetness, hence the need for previously steaming hard fruits. Large fruits require one pint of syrup to the quart while small fruits require but half as much.

In fruit canning, the choice of a method is arbitrary, but for vegetables such as beans, corn, spinach and asparagus—protein-containing foods carrying bacteria which form very resistant spores—the steamer method seems by far the best.

The fresh young vegetables are thoroughly washed and loosely packed in fruit jars. If packed tightly the heat penetrates too slowly to accomplish sterilization in the ordinary time allowed. Water seasoned with sugar or salt or both is used to fill the cans.

Vegetables are steamed in three ways: by steam under pressure, by steam long applied, or by steam intermittently applied. The first

method is not often available in the home, though it is the one most commonly used in commercial canneries. Here the temperature is raised to 230° or 250°C., by holding the steam under pressure in a pressure cooker. These pressure cookers can be purchased for \$10, \$14 or \$25 according to the size, and since they sterilize more surely and with less time and gas, their use in the home will undoubtedly become more common.

When steam is long and continuously applied, the cans are placed in a closed steamer of the type already referred to. Plenty of water is put in and the boiling continued for five to seven hours according to the kind and age of the vegetable used, and the size of the jar. Quart and two quart jars require a longer time.

The intermittent application of steam is carried out by applying it to the cans one hour on each of three successive days. This gives the spore forms a chance to become active or vegetative after the first or second steaming so that they can be easily killed.

There are various kinds of fruit jars on the market, each having its good and its bad points. The following statements are based upon the writer's experience with commercial jars. If bought by the dozen, a pint Mason screw top jar, with cover and rubber, costs \$.0482; a pint Atlas, with cover and rubber, costs \$.0774; and a pint Economy, with its lacquered rubber banded lid, costs \$.0999. Since the average time that a fruit jar is used is five years, one-fifth the original cost of the jar is added to the cost of each can of fruit.

The Mason jar is not easily kept clean, the mouth is small so that whole fruits, such as tomatoes, cannot be used in it. It is hard to seal perfectly and likewise hard to open after the contents have cooled and contracted. The Atlas, a type of the spring-top jar, has a wider mouth and is very easily sealed. The glass cover is readily cleaned, but, if broken, cannot be replaced as can the Mason and Economy jar covers. The Economy jar has the widest mouth and a lid to set on and clamp temporarily with the provided spring. The cover is sanitary and rather easily opened when pierced before removing. The great disadvantage is the high cost and the trouble and expense of buying new lids each year.

A DISTINGUISHED WORKER IN THE CHEMISTRY OF FOOD AND NUTRITION

C. F. LANGWORTHY

All students of nutrition and others interested in the composition and nutritive value of food owe a debt of gratitude to the veteran worker, Joseph König, Professor of Hygiene and Food Chemistry at Münster University, and Privy Councilor, who celebrated his seventieth birthday last November and in whose honor a special number of the journal, *Zeitschrift für Untersuchung der Nahrungs- und Genussmittel*, has just been issued, its contents being made up entirely of articles by König's former students. For many years König has been an editor of this journal which is the organ of the Association of German Food Chemists. The articles published in it present the results of a wide range of investigations. In addition to original work, it contains an abstract section of great value and is a very important part of the current literature of food and nutrition.

Professor König received his Ph.D. in Göttingen in 1867. In 1871 he was made Director of the Agricultural Experiment Station at Münster, in 1892 an Honorary Professor in the University of Münster, and a full Professor in 1899. In 1898 he was made Privy Councilor and in 1900 a member of the Imperial Council of Health.

He was a pupil of Liebig and of Wöhler and to both of these he owes much. One can truly say that his interest in agricultural chemistry and in the chemistry of food and nutrition he derives from Liebig, and his remarkable accomplishment as an analyst from Wöhler. After his academic career was completed, he turned his attention to agricultural chemistry and in 1871 at Münster began the splendid investigations which have added so much to our knowledge of foods and feeding stuffs. Many of his investigations had to do with methods of analysis, such, for instance, as the determination of plant ash, the estimation of cellulose, and the determination of nitrogen-free extract in feeding stuffs and foods, and he has also contributed much to the chemistry of other food constituents. Mention should be made of his studies of the nitrogenous constituents of wheat gluten and their relation to the baking quality of flour, of his study of fish as food, and of papers on butter and fats, on the relation of dextrose to levulose in sweet wines and honey, and on rye bread and rye milk. Another interesting piece of work has to do with the utilization of diets characterized by an



D. König

abundance of protein and fat and by little of each of these constituents. Another valuable paper has to do with the most important results of scientific studies of human nutrition, and this catalogue might be continued. König has devoted much attention to water and water analysis. He has also published papers of interest to students of domestic art, for instance, one on the estimation of cellulose in woods and in textile fibers. In this and his other work, his pupils have shared.

All students of nutrition owe a special debt of gratitude to König for his monumental work on the chemistry of food and nutrition, *Chemie der menschlichen Nahrungs- und Genussmittel*. The first volume, "The Chemical Composition of Human Foods and Condiments," which comprises over 1500 pages, presents what is surely the largest and most complete compilation of analyses of foods and beverages. The clearness with which the material is arranged, the copious footnotes giving special data as well as bibliographical references, and the very large amount of material included make this an indispensable reference work for the advanced student. The second volume, "Human Foods and Condiments; Their Preparation, Composition and Characteristics, Together with a Summary of Theories of Nutrition," brings together from a great variety of sources an enormous amount of material regarding the nature and uses of food and food accessories. The third volume is entitled "The Examination of Foods, Feeding Stuffs and Commercial Products." As yet only Part One has appeared, a volume of nearly 800 pages, which deals with general analytical methods. In his Preface to this volume, which was published in 1910, König states that the Second Part is to deal with the details of the analysis and inspection of foods, food accessories and commercial products. This will round out and complete a truly splendid work which brings together more information on food composition, analysis, and nutritive value of food than any other single work of its character. These volumes have not been translated into English. Nevertheless they can be readily consulted by those who have no great knowledge of German, because the material is so clearly presented.

In view of the very valuable contributions on food and nutrition made by this famous investigator and teacher,—famous for his splendid studies of analytical methods, his work in agricultural chemistry, the chemistry of food and nutrition and in hygiene—it seems fitting that THE JOURNAL OF HOME ECONOMICS should publish his portrait and join with his many friends and admirers in wishing him many more years of successful endeavor.

EDITORIALS

Come to Cleveland! Last year our meeting at Cornell proved to us how helpful and inspiring the week of comradeship could be. The program of day after day presented our varied interests and revealed to us the thread of common purpose which holds us together. We "helped everyone his neighbor," and everyone said to the other "Be of good courage." Our generous hosts made us welcome in a home of unbounded hospitality. We are looking forward to another meeting which shall be quite as helpful and enthusiastic as the meeting at Cornell. Let us all help to make it so.

The meeting of the American Home Economics Association will be held at Western Reserve University from June 30 to July 3. This annual meeting will follow a session of the Institutional Economics Section at Lake Placid from June 23 to 27.

At the Cleveland meeting we shall have as hosts the Department of Household Economics of Western Reserve University, over which Miss Mary E. Parker presides. Last September, the University opened a department of Household Economics in its College for Women, which has had a very prosperous year. President Thwing of the University will not only give an address of welcome, but will present to us his version of some of the essential principles of Household Economics. He has recently re-written his book on "The Family," which is a valuable contribution to the Household Economics library.

Miss Parker will introduce us to our environment, giving us an account of the year's work in Household Economics in the University. On Thursday, July 2, we shall consider extension work in Household Economics, certain problems in dietaries, and Household Economics in trade and industrial schools. We are hoping to have with us Dr. David Snedden, State Commissioner of Education in Massachusetts, and to have a report of the Lake Placid meeting. Mrs. Albion Fellows Bacon has promised to present to us problems in housing the poor, and Miss Miriam Chadsey of Cleveland, has been invited to speak on her experience with this side of housekeeping. Mrs. Schuyler F. Herron, of Winchester, Massachusetts, is arranging the housekeepers' program for Friday. Dr. Benjamin R. Andrews will present a report

of coöperative buying, and speakers are yet to be secured to present other vital subjects—Doing Your Own Work, and The Efficiency Expert as Visiting Housekeeper.

A morning will be given to Domestic Art, the program being arranged by Miss Craig of Pullman, Washington. The President's address will be given on the evening of July 1.

Excursions will be arranged, and visits made to centers of interest in the city. About ninety members of the Association can be accommodated at the University, and the overflow will be cared for by the Young Women's Christian Association.

Cleveland is a city of big and wholesome interests. Everyone is interested in the "Cleveland experiment," which is bringing about, for the various charitable endeavors of the city, coöperation in giving. Cleveland has done remarkably fine work in its schools of technical arts, and some of its stores have developed fine organizations for instruction in salesmanship.

Come early. Stay through the session. Expect to meet all your friends and have a thoroughly good time. Bring your questions, your plans, your inventions, and your enthusiasm. Let us have the best meeting yet! Come to Cleveland!

June Meeting of the Administrative Section. The Institution Economics Section of the American Home Economics Association will meet at Lake Placid Club, Essex County, New York, June 24 to 27, Wednesday to Saturday inclusive. This Section of the Association appeals to those interested in the larger group problems, and includes among its members lunch room and cafeteria managers, dietitians of hospitals, college dormitory directors, managers of clubs, settlements, tea rooms, etc.; laundry managers; and others whose work lies in directing the housekeeping of institutions.

The program will include subjects related to cafeteria management—equipment, standard measurements, organization, etc; buying and storing of food; unit costs of food in different institutions; problems of waste and garbage disposal; special phases of the laundry problem. Besides these, the question of training for institutional management will be discussed from the viewpoint both of courses offered in colleges, and of opportunities in the field for practice.

The members of this Section deem themselves especially fortunate to be invited to meet again at Lake Placid Club, which offers in itself such a splendid study in the organization of an institution.

Those interested in this Section's meeting, who would like to receive

the preliminary program which will soon be issued, together with information in regard to rates at the Club, etc., may write for information to the Secretary of the Section, Miss Emma H. Gunther, Teachers College, Columbia University, New York City.

Bulletins of the United States Public Health Service. There is a general impression that our government does very little to protect the health of its citizens; that it has more help to offer as to the care of pigs than of babies. As a matter of fact, an immense amount has already been done. Our health has been protected by our quarantine service, the aid of the Government has been sought by the States in epidemics of various sorts, and diseases have been carefully studied. The results of such investigations have reached the people most often through the medium of their own physicians whose training and knowledge were helped by the work. That our government through its various branches, for instance, through the Department of Agriculture, really sends out a great deal of information of direct and indirect effect on the health of human beings is well known to the readers of this Journal. It is less generally known that the United States Public Health Service under the charge of Surgeon General Blue has begun to issue a series of popular publications on health and hygiene designed for general distribution. A copy is sent to anyone who requests it and the publications are also sold by the Superintendent of Documents at a uniform price of 5 cents a copy. The series is designated Public Health Reports Supplements. The titles of these publications as they appear will be found in our bibliography. This is the same department which was known until a year and a half ago as the United States Public Health and Marine Hospital Service. It has done research work of the most fundamental character. Bulletin 56, *Milk in its Relation to Public Health* is a mine of information on this important topic, and Public Health Reports Supplement 10, *The Care of the Baby*, should be in the hands of every mother.

Syllabus of Home Economics. We wish to call attention to the advertisement, on the last cover page, and the review on page 301, of the revised edition of the "Syllabus of Home Economics," the first Richards Memorial Fund publication. It is very gratifying to state that the entire first edition was sold before January 1, 1914.

HOUSEKEEPERS' DEPARTMENT

The editors of the JOURNAL earnestly request assistance from the readers of this new department. They especially desire suggestions for timely topics on which information should be gathered; data either given directly or by reference to books and articles; and records of personal observation.

The following report of a coöperative buying club in a town of 22,000 inhabitants is especially interesting for the simplicity of the method which has worked efficiently for nearly two years. Note that although the amount of food distributed was large, no stock was raised, no store or fixtures acquired, no salaries paid and there was no dealing with non-members, also that the price paid by members for the food was the wholesale price plus cost of distribution.

Having already secured the curb market and a sealer of weights and measures, these public-spirited women will doubtless continue until they have established the third object for which they organized—the permanent market house and year-round market. Our readers will be kept informed of the later history of this club.

THE WOMAN'S MARKET CLUB OF GREENSBURG, PENNSYLVANIA

MARTHA B. STECKEL

On August 2, 1912, some public spirited women met for the purpose of effecting means to reduce the high cost of living. Local conditions and needs were discussed, a temporary organization was effected, and a few days later, August 6, the club was permanently organized with a simple constitution and by-laws which stated that "The purpose of this club shall be to secure the best food products at the most reasonable prices; to establish and maintain a successful curb market, and to endeavor to secure and establish a permanent market house and year-round market."

Before the end of the first year there was a membership of 573 which in fees of 25 cents each gave the club a bank account of \$143.25. The first year a curb market was maintained in one section of the town two mornings a week, the second year there were two curb markets three mornings a week. From the first, the club put forth every effort to have the commissioners appoint a sealer of weights and measures, but it was not until after the state constitutional amendment was passed making the appointment compulsory that this

appointment was made for the county. There have been car-load purchases of both potatoes and apples. Among other foods bought are cantaloupes, cranberries, celery, nuts of all kinds, sweet potatoes, butter, lard, Georgia cane syrup, oysters, fish, oranges, lemons and grape fruit. Our last addition has been tea, coffee and cocoa.

Country rendered lard in 50 pound cans was $13\frac{1}{2}$ cents per pound the past winter. When butter was selling at 45 cents per pound the club price for the highest grade creamery butter was 32 cents. We now buy 450 pounds of butter daily.

All regular and special buying is done through committees. Four standing committees on fish, oysters, fruit and butter have been doing duty throughout the winter season. It is the duty of each committee to seek out the best markets, to take and place all orders, to fix all prices by adding transportation to cost, to distribute goods at the time appointed, to pay all bills and make reports from time to time when called upon at the regular meetings which take place twice a month. As all officers and committees serve without compensation, every effort is made to spare them unnecessary labor and annoyance. The regular time for placing orders is immediately after club meetings, and not indiscriminately by telephone. Quotations are read in the meetings and arrangements are made to make any special purchase at any time there seems to be a demand.

When distribution is made, the committees are on duty from 8 to 9.30 every morning and any orders remaining uncalled for may be disposed of at that time.

For instance, when a car-load order is taken on potatoes, quotations include cost of sacking to facilitate handling, freight, and drayage. Payment must then be made when the order is placed, and a duplicate of the receipted order goes to the local Transfer Company which attends to the delivery when the car arrives.

The expenses of the club are very light, the monthly average having been \$6.69. Through the courtesy of the Board of Trade and the Rink Company, the Market Club has always been provided with a place of meeting without expense other than necessary janitor service. Instead of incurring the expense of maintaining a regular distributing station, the use of a centrally located store room is secured at such times as are necessary. At present a combined candy store and lunch room is used every Friday morning from 8 to 9.30 for a consideration of \$1.00.

Butter and either fish or oysters are distributed every week and fruit every other week. When fish is distributed—frequently three or four kinds—a man is employed to sort, weigh and wrap according to the order list. Other expenses include stationery, wrapping paper, newspaper announcements and subscriptions to the *Packer*, both the New York and the Cincinnati editions.

MARKET CLUB RECIPES

Home Made Vinegar. To 3 gallons of water, add 3 pounds dark brown sugar. Let come to the boiling point, cool and put into a wide mouthed jar. When quite cool put into the jar a large slice of toast with two cakes of Fleischman's yeast spread on one side. Turn spread side down on liquor. Cover tight. When done, the bread will be in the bottom of the jar. Strain and use.

Home Made Baking Powder. Mix and sift together, 1 pound cream of tartar, $\frac{1}{2}$ pound of corn starch, and $\frac{1}{2}$ pound baking soda. Sift several times. Put into tin cans. After two weeks (during which time it is undergoing the sweating process), sift again several times. It is ready for use immediately after the first mixing.

THE NEW ENGLAND COÖPERATIVE SOCIETY

A society has been incorporated under the above title on the plan of the well-known English Rochdale System. As a first step they have taken over four coöperative markets that were established some time ago in Boston. Authorized capital stock is stated as, preferred \$175,000, common \$25,000. According to their statement, "At present the producers receive 35 per cent of the retail price of food products in this country, the railroads seven per cent, while jobbers, commission men, wholesalers and retailers divide the other 58 per cent."

They propose to reduce the cost of living by purchasing direct from producers in wholesale quantities, eliminating middlemen's profits, selling strictly for cash at one small profit above cost of production and distribution, cutting out the losses and needless expenses of credit business, dividing net profits among members in proportion to their purchases.

This movement is still too new for us to be able to report anything more definite as to its prospects. The names of the promoters are those of men well and widely known in their community.

THE MONTCLAIR COÖPERATIVE SOCIETY

This Society has held its second annual meeting and reports a trade of \$30,000 in the closing quarter of the year at an expense of 14 per cent including delivery. The store seems to be making a real contribution to the problem in its novel plan to avoid needless delivery by giving a bonus or rebate on purchases taken home by the buyer.

The Society did not pay dividends on stock because of heavy losses the first of the year from incompetent management; they have not found any "short cut through a bed of roses" but the interest and enthusiasm of members remain unabated as shown by the large attendance at the annual meeting. They feel that they have found the solution of the problems of pure food and the high cost of living.

BUSINESS MANAGEMENT IN THE HOME

MILDRED N. BALL

Can the principles of ordinary business management be successfully applied to the finances of the home? Any satisfactory answer to this question must come from the housekeepers themselves, and not from the theorists. But how many practical housekeepers have seriously and intelligently tried business methods in handling household money?

Will women undertake this practical business side of home-making and discover what can and what cannot be accomplished? Or will it all finally have to be worked out by men? The home, like any other business organization, must stand on a firm financial foundation if it is to be operated successfully. Man has long considered the provision of a family income his absolute duty when he marries. Woman should just as conscientiously feel it her duty to wisely and economically administer this income. To do this she must evolve some systematic plan of handling the money.

Some housekeepers do this in a simple way by allowing definite amounts for household expenses, dress, miscellaneous expenses, etc. It is easier to make this allowance with accuracy if these broad headings are subdivided and a simple budget arranged.

A convenient classification for family expenditures is as follows: shelter, food, equipment, operation, clothing, incidentals and advance-

ment. By shelter is meant the house rent or interest on the house that is unpaid for. By equipment is meant the furniture, fixtures and apparatus required in the home. Operation includes heat, light and service. Incidentals provides a column for those miscellaneous expenses which belong under none of the other heads. Advancement stands for all that the word means and under it we place educational expenses, books, magazines, lectures, travel, charities, church expenses, etc.

For those who object to the filing system, a simple method of keeping accounts is to obtain a large account book, use two pages which face each other and rule on the right side of the first page four columns for: food, equipment, operation and shelter. Subdivide the food column into three—groceries, meat and dairy. On the opposite page rule three columns for clothing, incidentals and advancement. Clothing may be subdivided into a column for each member of the family.

The first item in the food account each month is inventory—that is, an inventory of food supplies on hand at the first of the month.

At the end of each quarter and half year a comparison of the actual expenses and the allowance according to the budget should be made so that one may know if she is living in accordance with the allowance planned. In order to have budget making sufficiently accurate to be valuable, one needs carefully kept accounts of the previous year for comparison. A careful study of the accounts assists in making the next year's budget. If too much or too little has been allowed, or if circumstances call for closer economy, or if income permits larger expenditures, budget and accounts show just where the change can easily be made.

Any housekeeper who has not tried keeping a budget and accounts will be delighted at the feeling of security it gives. There is so much less worry and anxiety as the expensive seasons of spring and fall approach, when summer and winter clothing for the family must be purchased, if one knows that a certain amount has been set aside for that expense and that in buying up to that limit the grocery and meat bills are not threatened.

Having once used a budget and kept systematic accounts, no housekeeper will ever think them too much trouble. The joy of feeling that she is controlling the finances of the household and that they are not controlling her is a sufficient reward for any woman for all the time and effort expended.

THE FAMILY BUDGET¹

The comparison of many budgets, in such studies as those of the United States Bureau of Labor² and the volumes of Chapin,³ and Ellen H. Richards⁴ gives information and suggestion concerning standards and appropriate expenditures for the essential items of shelter, food, clothing, health protection, and sundries. Thus:

An expenditure of from \$600 to \$700 a year provides the typical family of two adults and not more than three children only inadequate shelter and clothing and a mere approach to adequate nutrition; they must depend upon public aid for health protection and recreation.

From \$800 to \$900 a year, adequate in some European countries, is scarcely so in the United States.

A family budget of from \$900 to \$1000 a year will provide physical necessities in New York City, including fair shelter and clothing, something for health protection and recreation, and food that is adequate, when measured by the accepted minimum of 23 cents a day for each adult.

At \$1100 a year savings begin to be appreciable, the cost of women's clothing begins to exceed that of men, and, in the country, comforts become possible.

A \$2000 budget has been ideally divided into 25 per cent for food, 20 per cent each for rent and clothing, 15 per cent for operating expenses, and 20 per cent for "the higher life."

In budgets of from \$2000 to \$4000 a year, 25 per cent is assigned for food, 20 per cent for rent, 15 per cent each for clothing and operating expenses, and 25 per cent for "the higher life."

An expenditure of \$4000 a year shows operating expenses of 17 per cent and clothing of 12 per cent.

As incomes increase, the proportion spent for shelter remains constant, food decreases, clothing increases, and furnishing and sundries increase rapidly, all according to the general laws of Engel, somewhat modified for the United States.

¹ Reprinted from *Household Management*. Mary L. Furst, Teachers College Bul., No. 8.

² Retail Prices (and Budgets). U. S. Dept. Com. and Labor, Bur. Labor Buls. 105, pt. 1, 1912; 106, pt. 1, 1912; 108, 1912; U. S. Dept. Labor, Bur. Labor Buls. 110, 1913; 125, 1913; 132, 1913; 136, 1913.

³ The Standard of Living among Workingmen's Families in New York. Chapin. Charities Publication Committee, New York, 1909.

⁴ The Cost of Living as Modified by Sanitary Service. Ellen H. Richards. J. Wiley and Sons, New York, 1899.

The maintenance of standards, however, depends less upon income than upon a wise expenditure. Inadequate food, for example, is often due largely to lack of wisdom in selection and purchasing. Saving, on the other hand, denotes self-control, imagination, resourcefulness, and character, both in individuals and in nations.

The ideal standard is influenced by environment, imitation, tradition, habit, and by other considerations, not only of utility and of custom, but of emulation and display in "conspicuous consumption" and "conspicuous waste."

Both standards and expenditures may be tested by estimates of adequacy, comfort, and richness of life.

HOUSEHOLD ACCOUNTS AND DIVISION OF INCOME¹

There is no hope for any plan for keeping household accounts that requires a large amount of time. Here is one that calls for fifteen minutes a week. It claims to have been put to the test of use, and with perfect success. It also suggests that division of the income which is more and more coming into general use.

TABLE A

Weekly income, weekly divided into three bank accounts

1	2	3
Man's personal account.	Woman's personal account.	Family account in the name of both.

TABLE B

Weekly amount put in each division

1	2	3
Equal to the woman's.	Equal to the man's.	The remainder.

Illustration I. Supposed income—\$25.00

1	2	3
\$3.00	\$3.00	\$19.00

Illustration II

1	2	3
\$5.00	\$5.00	\$15.00

TABLE C

Uses

1. Clothes, carfare, charity, amusements, society dues, ordinary dentist and doctor bills, etc.

2. In general, the same. Exception, doctor's bills in maternity.

3. No money is spent from this account without mutual consent.

First, a stated weekly sum is given the wife for food expenses. On \$5 she can provide for them both, and also the friend who drops in, and pay for other grocery items, matches, soap and kerosene.

¹Philadelphia Sunday *North American*, January 19, 1913.

She also is the arbiter of other household expenses, under a stated sum. Articles costing more than this should be agreed upon mutually.

After these expenses and the rent, laundry, gas and coal are paid for, the remainder constitutes the mutual savings, belonging equally to both.

When the children come, another stated sum is set aside for their clothes, etc. Thus the woman has two account books to keep—"food" and "children." They may be simply kept, without detail. The use of different purses for different accounts, "food," "children," "personal," is really no trouble, and wholly simplifies the account keeping.

When the man or the woman has a special personal expense the private account cannot afford, but the mutual account (No. 3) can afford, the one may draw the needed sum, provided at the same time a like amount is drawn and deposited in the private account of the other.

Should the wife earn any money, as the simplest way of equal division also on her part, it would be deposited in account No. 3.

POINTS IN EFFICIENCY¹

CHRISTINE FREDERICK

In order to standardize any task we must first separate it into its component elements. For instance, in cleaning take the sweeping, dusting, and mopping. How are these done in the average home? One room is swept, dusted and mopped, and these processes repeated afterward in each room. In any task requiring a bodily adjustment you must keep that adjustment as long as possible in order to acquire speed. Every time you change your adjustment from sweeping to dusting you lose time; and you lose time whenever you pick up and lay down a broom, a duster, or a pail. The efficiency method then, where there are a number of processes to be repeated in several rooms, is to do the one process as long as possible.

To prove this in figures, three rooms averaging 10 by 12 in size were cleaned in respectively 13, 15 and 16 minutes, doing the various processes in each room separately. These same rooms were cleaned, doing each process straight through, in 11, 12 and 13 minutes, with a total of 36 as against 44, or a gain of 8 minutes. In the first place there was a handling and picking up of the broom and other utensils three times; in the second place, once.

It is difficult to say just how dish-washing can be standardized, but it can be separated into its elements, which include stacking, sorting, washing, drying, and laying away. The wiping usually takes too long,

¹ Extracts from an address given at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913.

but a drainer will minimize the time. In order to lessen the steps taken to lay away the dishes, you may have shelves conveniently placed.

Every cooking task on final analysis can be divided into three distinct parts—the grouping of materials and utensils for the work, the preparation of the food, the clearing away.

From various experiments done over and over again we find that the variables on which we can increase our efficiency are in the first and last groups. It is simply impossible to beat an egg in less than a certain given time with a given egg beater or particular device, but, if you can increase your efficiency in your grouping and laying away your tools, you have increased the total efficiency of making your sponge cake.

We have found the causes of inefficiency in a great many household tasks to be: lack of needful utensils; wasted time running around for utensils; wasted effort and time in bringing the various ingredients; stopping in the middle of a task to do something entirely unrelated to it; loss of time due to insufficient supplies on hand; and incorrect position or height of stool or other working surface. An examination of 75 sinks, both in apartments and private homes, showed that they averaged from 27 to 32 inches in height, and 20 girls were tested with an adjustable table, raising and lowering the dish pan until the height was found which required the least effort in doing their work. There seemed to be a distinct ratio between the height of the person and the height of the working surface. For a person 4 feet 10 inches tall the table should be 27 inches high, with an increase of about 2 inches on the table for 4 inches on the person.

We all know that the small kitchen is the efficient one, but there is also a scientific reason for the arrangement of equipment in the kitchen. When analyzed, all kitchen work is resolved into two distinct processes, preparing food and clearing it away. In preparing food the storage is our first piece of equipment, the table the second piece, the stove the third; and then the food is taken to the dining room. All of these steps are included in the first preparing group. The clearing away process involves the use of the sink, the pantry and the shelves. The parts of these processes should be kept separate, and the storage, table, stove, dining room, sink and shelves should be so arranged as to avoid unnecessary retracing of steps. That which counts most is not the skill with which any one particular task is done, but the skill with which that task is done in relation to other tasks.

The other object of our standardizing task is to find the approximate average time it takes to do the tasks that come into our daily routine. We must get the work down to a schedule if we are going to have time to do anything else. You must work out for yourself schedules which vary, of course, with varying conditions. Every well-planned schedule has a definite rest period. It is not efficiency to work until you drop; many of our housekeepers see only the tread mill of work, and think that the more work they do the more efficient they are.

In running the home there are many different kinds of data and records; there are the gas receipts, the rent bills and milk bills, and it is always a question of where to turn for this address, or this bill, etc. A file for all these is most satisfactory because it is a unit idea, and it is capable of infinite expansion. You can make special headings for it according to your special needs.

We have a feeling that the servant problem is vital; it is, but not so vital as the problem of the young married woman who perhaps is a trained worker in some other line, but does not know the first principles of home making and housekeeping, and has no money for a servant.

Our greatest enemy is the woman with the career. When she is a housekeeper, she feels that she is weighted down; or she has an automatic, dull sort of duty toward housework in general. The intelligent attitude of mind is that home making is not drudgery; that home making is a big business, and that it is just as interesting and just as stimulating to make a splendid cake on a schedule as it is to pound a typewriter all day for nine dollars a week; that home making is just as stimulating and just as cultural as work in art or in any of the fields in which women are running with eager feet because it expresses their wonderful individuality. Let such a woman come into the home and express her art through its decoration, its furnishings, and its color schemes; or instead of going into a narrow field of dietetics, let her come into her home and there plan balanced menus and study nutrition values for her own family. Let her find it just as interesting to care for her own children as it is to go down on the east side and take care of Annie Bolowski.

We have talked very much about schedules and standardizing work, and about efficient workers, but this is not the whole result of efficiency. The object of your work is not so many cakes, not so much information on this line or that, not so much testing, but it is the home and the happiness and success of that home.

TREATMENT OF HOUSEHOLD WASTE

H. T. VULTÉ

Waste or refuse may be defined as material of little intrinsic value for which we have no further use. This is a sad confession of a lack of efficiency along economic lines which usually leads to results that are highly deleterious and dangerous to health. There is no more serious problem now before us than the economic and sanitary disposal of this material.

It is best to classify waste materials under liquid and solid, and to deal separately with each class and its various subdivisions. Liquid waste containing more or less putrescible matter is now generally classified as sewage. As a rule sewage is collected by a system of piping and delivered at some central point where it is cast loose in a stream or body of water to plague the existence of helpless individuals in a more or less remote locality.

At times the dwellers in isolated regions carefully conduct the material into a specially constructed underground pit or cesspool whence it flows by gravity or is drawn into the water supply. Sanitary sewage disposal should be compulsory in every community having a water supply.

For isolated localities, accessible cesspools built of impervious materials can be provided and after the putrefying period has passed, the liquid product may be conducted through a series of drain pipes to irrigate and fertilize growing crops.

The most serious difficulty experienced with waste and drain pipes is due to fatty matter cooling and depositing on the walls. Various devices known as grease traps may be used to cool and solidify the fats, but the simple precaution of cooling all fatty liquid, and removing the cake or crust of congealed fats before pouring away the liquid, would obviate any such stoppage and furnish clean, pure, fatty matter for sale or domestic use.

Solid waste is best divided into putrescible and non-putrescible matter. The former includes inedible trimmings of fruits, vegetables and other foods and various articles of food no longer desired in the household. If this can be kept in clean, cool receptacles and frequently collected, it serves as an excellent food for animals. In any case, by drying to a moisture content of 25 per cent or less, all immediate danger of change will pass. Perhaps it is best to dry the material in small

quantities by the surplus heat of the cook stove or range and then burn it when most convenient.

The non-putrescible matter consists of combustible material such as paper, straw and the like and non-combustible substances, such as ashes, broken glass and crockery, metals and tin cans. Newspaper and wrapping paper may be sold. Ashes, broken glass and clean cans are valuable filling material in most communities and have been successfully used for many years in raising the level of low lands. Metals of all kinds are salable as junk. It is little short of criminal to mix these waste materials as advocated by some authorities and practiced in many communities.

It may be said that dwellers in city apartments cannot, with their limited space, afford the necessary storage room for keeping waste materials separated. There is no reason, however, why the owner or manager of such apartment building should not provide the necessary space in the basement and put its management in charge of some competent person. This would add very little to the present duties of the janitor and he would be paid by the disposal of such material as is salable. The management might even provide a small cremating furnace for combustible matter.

Some of our largest cities strictly enforce ordinances applying to the collection of refuse materials but signally fail in their proper and economic disposal; while others, too few in number, actually make the collection and disposal self-supporting. After all it is a question which directly affects the tax-payer. For lack of system, he pays dearly; with common sense planning and administration, the draft on his income would be greatly reduced.

It must be borne in mind that many of our important industries were in a precarious condition years ago on account of their utter indifference as to the so-called waste products. As a result of study and careful planning and operation, these wastes have been converted into useful merchantable forms and have added to the profits of the whole operation, while greatly improving the sanitary conditions.

Is it too much to hope that equally beneficial results may be obtained from educating the householder along these lines?

OVEN TEMPERATURES¹

The greatest claim that can be made for the subject of cookery is that we are trying to approach it scientifically. This means the standardization of processes formerly evolved by long experience and much wasteful experimentation, and accomplished only through the sacrifice of much good food material. The question with which teachers of cookery are confronted today is: how can the expert best pass along her information in trying to instruct the person who must become proficient in a comparatively short space of time?

The need for standardization of cookery temperatures is evident from the variations in the rules of experts, the vagueness of directions in the best cook books in everyday use, and the evident lack of agreement on the meaning of the terms "slow," "medium," "hot," as applied to oven temperatures.

The following *Directions for Cooking* were gleaned from some of the leading cook books in daily use: "Bake until thoroughly done." "Bake until brown and crisp on the surface." "Roast in a hotter oven than for fowl." "Bake one hour or more." "Bake until done, the time depending upon the thickness."

In lieu of a thermometer the indicators generally used are sensation, counting, color changes in various kinds of paper, etc. The inadequacy of these methods was proved by tests made in the laboratory.

A number of students combining the first and second methods by holding the hand in the oven, showed a range of from 20 to 100 counts in an oven at a temperature of 250° F. and 5 to 30 counts at 450° F.

Using the third method, the recorded temperatures at which a certain paper would brown varied from 376° to 463° F. When cakes were baked in a "moderate" oven a thermometer showed that the girls who had depended only upon the "sensation indicator" were using temperatures from 145° to 420° F.

A careful study of temperatures which yielded the best results with certain recipes gave the following classification: slow, 250° to 350° F., custards, meringues; moderate, 350° to 400° F., bread, gingerbread, plain cake, cookies; hot or "quick," 400° to 450° F., Parker House rolls, popovers; very hot, 450° to 550° F., biscuit, pastry. The best temperature for sponge cake and angel food was between slow and moderate, and for baking powder biscuit, between hot and very hot.

¹ Compiled from *Standardizing Oven Temperatures*. May B. Van Arsedale, Teachers College Bul., Ser. 5, No. 8.

The objection will be raised that the use of a thermometer in cookery, is not practical for the housewife, but it is evident that her own temperature sensations are not to be relied upon. Even the oven-door thermometer, although it does not record the exact oven temperature, may be sufficient after she has experimented to find the figure for the best results.

Regarding the inexperienced housewife it can truly be said that with an accurate thermometer her results would undoubtedly be more uniformly good; and we believe that the recipe books of the future should not read merely "bake until done" in a "moderate oven" "according to judgment," but will also state how long and at what temperature, so that in the hands of even the inexperienced these recipes will yield not occasionally good, but uniformly good results without the discouragement of many failures, the sacrifice of much time and the waste of good material. Thus the scientific treatment of the subject added to our traditional knowledge should tend to evolve a higher type of cookery than we have had in the past.

JELLY MAKING

The discouraged housewife at the end of a hot summer day wonders why her jelly did not "jell," why it is soft, or gummy, or lumpy. Or, if successful one day, she probably fails to record the exact time, amounts of materials, etc., that will insure uniform results for the future. She may not know that jelly "jells" because of the presence of a substance called pectin, that it is often absent in raw fruit but present after boiling; that a certain amount of it can utilize only a certain amount of sugar, and that if increased beyond that definite amount, continued cooking will produce only a gummy mass; or that too little or too much boiling after sugar is added to the juice may cause the sugar to crystallize.

She may easily make her own test for pectin by adding to the fruit juice an equal volume of grain alcohol. A gelatinous mass shows the presence of pectin. She may be sure of uniform success if she makes use of facts obtained in laboratory experiments such as were conducted and reported by Miss Goldthwaite of the University of Illinois. Extracts from her report¹ are here given.

To very juicy fruit, such as raspberries, currants, etc., add 1 cupful of water to 4 or 5 cupfuls of fruit and allow to cook slowly in an enam-

¹Principles of Jelly Making. N. E. Goldthwaite, University of Illinois Bul., IX, 1912, No. 36.

elled kettle. When simmering, crush the fruit and when well cooked transfer to cheesecloth and allow to drain, but do not squeeze. One or two more extractions may be made by returning pulp to kettle, adding water, and boiling, the number of extractions depending upon the pectin present. Proceed in the same way with less juicy fruits, such as apple, quince, etc., but cover with water before cooking. The first extraction should be treated by itself. The correct proportion of juice to sugar varies from $\frac{3}{4}$:1 to 1:1 by volume. Currants and partially ripened grapes demand 1:1, while $\frac{3}{4}$:1 is better for raspberries, blackberries, apples, cranberries, etc. The condition of the fruit may necessitate a change in these proportions. When in doubt it is better to err on the side of too little rather than too much unless a soft jelly is desired.

If the second and third extractions are boiled down until they show about the same proportion of pectin as the first extraction contained and then treated in the same way, there is no need for any second class jelly.

For all extractions, boil the juice and skim before adding the sugar (preferably hot), and continue to boil about the same length of time afterward. Jelly should be made from the extractions as quickly as possible. The juices mentioned before as requiring the greater proportion of sugar need to be boiled only from eight to ten minutes; the others from twenty to thirty minutes. Long simmering of pectin in acid changes it to substances which have no jelly-making power.

The best test, and one which does not cause delay, in determining when the jelly has boiled sufficiently is to see whether the boiling mass breaks off or sheets off as a portion drops from the stirring spoon.

Other conclusions were reached, such as the following: Jellies from but slightly acid fruits may be made by adding a teaspoonful of acid powder (citric or tartaric) to a quart of the juice, but this process is not recommended except in the case of sweet apple or quince juices. The white inner skins of oranges and of lemons are prolific sources of pectin, hence genuine jellies from these fruits may be made. The pectin from these skins may also be used for strengthening other fruit juices. Apple-juice may be made a basis for other fruit-jellies. Beet-sugar and cane-sugar may be used interchangeably in jelly-making.

Good jellies cannot be made from all juices by rule o' thumb. Jelly-making as practiced in the home is an art—an art founded on scientific principles. It consists in so controlling conditions by means of sugar (and acid), and by boiling, as to cause the pectin to "set" in a continuous mass throughout the volume allotted to it.

THE FEEDING OF YOUNG CHILDREN¹

(Continued from the April JOURNAL, pp. 179-181)

Child 4-8 years old

Breakfast:	Oatmeal Mush	1½ oz. dry cereal
	Top Milk	4 oz.
	Stewed Prunes	4 or 5
	Toast	1 slice
	Milk to drink	6 oz.
Dinner:	Pea Soup	1 cup
	CROUTONS	1 slice bread
	Boiled Onions	2 small
	Baked Potato	1 large
	Molasses Cookies	2
Supper:	Cream Toast	2 slices bread
	Rice Pudding with	
	Milk and Sugar	1 cup
	Milk to drink	5 oz.

Nutritive value and cost

MATERIAL	WEIGHT	PROTEIN	FUEL VALUE	COST
	<i>ounces</i>	<i>grams</i>	<i>calories</i>	<i>\$</i>
Rolled oats.....	1.3	6.1	150	0.0045
Prunes.....	1.3	0.7	100	0.0100
Milk.....	34.4 (1 qt.)	32.2	675	0.0900
Bread.....	3.0	10.5	300	0.0120
Peas—split.....	1.0	6.9	100	0.0056
Onions.....	4.0	2.0	56	0.0120
Sugar.....	1.0	6.9	115	0.0046
Potato.....	5.0	2.5	96	0.0078
Cookies.....	1.0	2.0	100	0.0040
Rice.....	1.0	2.3	100	0.0050
Butter.....	0.5	0.1	100	0.0110
		65.4	1892	0.1545

Substitutes or additions

For Rolled Oats: Other cereals, as suggested on page 181 of the April JOURNAL.

For Onions and Peas: Strained dried beans; other vegetables carefully cooked; fresh lettuce.

For Prunes: Fresh ripe apples, baked bananas, other mild fruits well cooked.

For Rice Pudding: Junkets, custards, blanc manges, bread puddings, and other very simple desserts.

For Cookies: Gingerbread, sponge cake, or very plain cookies.

¹Extracts from The Feeding of Young Children. Mary Swartz Rose, Teachers' College Bulletin, Ser. 2, No. 10. The prices have been revised to date.

Child 8-12 years old

Breakfast:	Oatmeal Mush	1½ oz. dry cereal
	Top Milk	6 oz.
	Stewed Prunes	6 or 7
	Toast	2 slices
	Milk to drink	6 oz.
Luncheon	Pea Soup	1 cup
	Boiled Onions	2 small
	Baked Potato	1 large
	Bread and Butter	2 slices bread
	Molasses Cookies	3 cookies
Dinner:	Baked Haddock	Small serving
	Creamed hashed potato	¾ cup
	Spinach	½ cup
	Bread and Butter	2 slices
	Rice Pudding—milk and sugar	1 cup

Nutritive value and cost

MATERIAL	WEIGHT	PROTEIN	FUEL VALUE	COST
	<i>ounces</i>	<i>grams</i>	<i>calories</i>	<i>\$</i>
Rolled oats.....	1.5	6.1	150	0.0060
Prunes.....	2.0	1.0	150	0.0150
Milk.....	34.4	32.2	675	0.0900
Bread.....	6.0	15.6	440	0.0246
Butter.....	1.0	0.3	200	0.0220
Peas—split.....	1.0	7.0	100	0.0056
Onions.....	4.0	2.0	56	0.0120
Sugar.....	1.0		115	0.0036
Potatoes.....	8.0	4.0	152	0.0122
Cookies.....	1.5	3.0	150	0.0060
Rice.....	1.5	3.4	150	0.0075
Haddock.....	2.0	10.5	68	0.0050
Spinach.....	2.0	1.2	14	0.0015
		86.4	2420	0.2110

Substitutes or additions

For Rolled Oats: Other cereals thoroughly cooked.

For Haddock: Rare beefsteak, roast beef or mutton chops; other fish, especially white varieties.

For Prunes: Any mild ripe fruit uncooked or cooked.

For Onions: String beans, stewed celery, beets, squash.

For Peas or Spinach: Turnips or cauliflower.

SUGGESTIVE DIETARY FOR CHILD WHO WILL NOT DRINK MILK

Age 5 years(1 Quart of milk concealed in the *ménu*.)

Breakfast:	Oatmeal	$\frac{1}{2}$ cup cereal cooked in 1 cup milk
7.00 a.m.	Creamy egg on Toast	1 egg yolk with $\frac{1}{2}$ slice bread and $\frac{1}{4}$ cup milk
	Cocoa	1 tsp. cocoa and $\frac{1}{4}$ cup milk
10.00 a.m.	Zwiebach and Cream	1 piece zwiebach and 1 tbsp. cream
1.30 p.m.	Spinach Soup	4 oz.
	Baked Potato with cream	1 potato and 2 tbsp. cream
	Bread and Butter	1 slice
	Caramel Junket	$1\frac{1}{2}$ cup
5.30 p.m.	Rice and Prunes	2 tbsp. rice cooked in $\frac{1}{2}$ cup milk and 5 prunes
	Zwiebach	1 slice

Nutritive value and cost

MATERIAL	WEIGHT	PROTEIN	FUEL VALUE	COST
	<i>ounces</i>	<i>grams</i>	<i>calories</i>	<i>\$</i>
Oatmeal.....	0.9	4.2	100	0.0030
Egg yolk.....	0.5	2.0	47	0.0130
Cocoa.....	0.1	0.5	11	0.0025
Zwiebach.....	0.8	2.3	100	0.0145
Toast.....	0.7	1.8	50	0.0027
Spinach soup.....	4.2	3.9	100	0.0162
Potato.....	4.0	2.0	75	0.0060
Rice.....	1.0	2.3	100	0.0030
Prunes.....	1.3	0.7	100	0.0100
Milk.....	34.2	32.2	675	0.0900
Sugar.....	0.4		40	0.0013
Butter.....	0.2		33	0.0036
		51.9	1431	0.1698

BOILED MILK

Certain milk standards have been agreed upon by the National Commission on Milk Standards¹ and the International Milk Dealers Association. Their efforts to raise the standards of milk and to get individual communities to require those standards are certainly to be

¹ U. S. Public Health Reports, 28, 1913, no. 34, pp. 1733-1756.

commended and yet their chief measure of safety, pasteurization, is at present a debatable question.

There is little doubt that keeping milk at 60° to 65°C. for twenty to thirty minutes destroys all pathological bacteria, but those which cause putrefaction remain. These cause pasteurized milk to decompose, a change which has been noticed by the housewife who has discovered the bad odor of milk which is not sour but has not been kept on ice after pasteurization. Experimenters have not agreed as to whether any lactic ferments may remain or as to whether the gentle heating causes a change from a substance which clots to one which putrefies.

It would seem wiser to boil the milk, but this suggestion has met with much opposition by those who claim that boiling destroys immunizing substances, and substances helpful to digestion, and that boiled milk causes constipation. The first claim is absurd, for if the cow's milk contained any immunizing substances it would not be effective in the human system. As to the second, it is probable that the substances referred to as aiding digestion or nutrition do not exist in pure milk but are derived from bacteria. Experience in Germany and Austria, where boiled milk is the rule rather than the exception, shows that the effect referred to in the third claim is negligible. In the feeding of children it is found that curds do not occur in the intestines if boiled milk is used and that any constipating effects would be negligible as compared with the intestinal diseases arising from raw milk.

While specialists are working on these open questions it would be well for those who are not sure of the purity of their raw milk supply to take the following precautions:

Insist upon careful inspection of pasteurization in the dairy, for although laboratory pasteurization may make milk perfectly safe, commercial pasteurization may often be carelessly done and may lead to serious results because the consumer is deceived. Keep the pasteurized milk on or near ice. Finally, as a last resort and an absolute safeguard, boil the milk. This insures perfect sterility, for it destroys lactic, pathological, and all other organisms so that even the putrefaction which takes place in properly pasteurized milk need not be feared.

EFFECT OF COLD STORAGE

Fish can be kept for two years in cold storage without any depreciation in its nutritive value, any change in its sanitary character, or any diminution of its culinary virtues or its palatability. This is the very comprehensive and hopeful report made by chemists of the College of Physicians and Surgeons in New York City.¹ Note, however, that there is nothing in the statement which gives a clean bill to all cold storage fish. All depends upon the condition of the fish at the beginning and the efficiency of the method. The cold storage process of food preservation when of the right kind and rightly applied is a boon to the housekeeper. It is only when the process is misused, either ignorantly or unscrupulously, that harm results.

PRESERVATION OF EGGS

When eggs reach their fabulous winter prices it would be gratifying to be able to depend upon a home supply which had been stored during the summer. That every home may have such a supply and find the eggs very palatable after a period of several months has been proved by experiments conducted at various agricultural experiment stations.

The preserving preparation recommended in a government bulletin² consists of one part of syrup-thick pure water glass dissolved in ten parts, by volume, of cooled boiled water. This is to be poured over clean (but not washed) eggs which are packed in a clean vessel. One gallon of water glass will make sufficient solution for 50 dozen eggs if properly packed.

A SOCIAL NEED

In a certain primary school in New York attended by 1420 children under twelve years of age, it was found that 758 did the family marketing and that in 307 of the families represented the mothers went out all day to work.

But in this school there were no cooking classes in which the teachers could help these little mothers to buy wisely and to cook a few nutritious dishes. This suggests that it would be well for any one interested in public welfare to inquire into such conditions.

¹ W. A. Perlzweig and W. J. Gies: A Further Study of the Chemical Composition and Nutritive Value of Fish Subjected to Prolonged Periods of Cold Storage, *Biochemical Bulletin*, III, 1913, No. 9, pp. 67-71.

² U. S. Dept. Agr., Office Expt. Stas., Farmer's Bul. 128. Eggs and Their Uses as Food.

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BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS at the price listed.

Rearing an Imperial Race. Containing a Full Report of the Second Guildhall School Conference on Diet, Cookery, and Hygiene, with Dietaries; Special Reports from H. M. Ambassadors Abroad; Articles on Children's Food Requirements, Clothing, Etc. Edited by C. E. Hecht. London: The St. Catherine Press, 1913, pp. xlviii + 508, pls. 12, fig. 1. Price, 7s. 6d.

The National Food Reform Association is blazing a trail in the matter of titles for the reports of meetings, a form of literature not very attractive to the average reader and in which the results of many hours of labor are likely to lie buried. The report of its first conference, held in Guildhall, London, in 1912, was given to the public under the title "Our Children's Health at Home and at School" (reviewed in JOURNAL OF HOME ECONOMICS, 5, 1913, no. 4, p. 340), and now comes the second year's proceedings under the still more alluring name, "Rearing an Imperial Race." The example might well be followed by other organizations.

Less can be said about the typographical means employed to make clear the relation of things and about the arrangement of the material in the book, which, since it is likely that it would prove useful chiefly to students of practical dietetics, should be readily accessible. A given student is likely to be specially interested in some one phase of the subject—in rural school lunches, perhaps, or in the teaching of hygiene, or to want particularly to know what some one authority contributed to the symposium. Such a student is likely to be lost in the mazes of the volume, not so much perhaps for lack of guide posts as for a bewilderingly large number of them. Almost every paragraph has a conspicuous heading in large type calling attention to what is to come, and calculated to be rather distracting to the reader who is able to see his own way through ordinary text. "A Plea for Indulgence," for example, as a paragraph heading, is hardly necessary for the purpose of indicating that the woman who opened the discussion apologized for being unprepared, since the fact is clearly stated in what follows, and, since it is in type no larger and no more conspicuous than the headings which have gone before, it is hardly a successful means of showing that a paper has come to a close and the discussion has begun. For reference purposes too it would be helpful to have a clearer division between the papers actually presented at the conference and the other material which the editor has selected from one source or another and considers relevant. Then too, editorial comments are not separated from other matter by any of the usual typographical devices.

Of good material there is much, a fact which renders the poor arrangement even more regrettable. The papers read at the conference are grouped under four general heads: Diet, Cookery, and Hygiene under the Education (Provision of Meals)

Act, 1906, and Education (Scotland) Act, 1908; Life and Diet of Primary Scholars; Teaching in Public Elementary Schools of Personal Hygiene, Food Values, Domestic Catering and Cookery; Diet, Cookery and Hygiene in Day and Residential Institutions for Children and Adolescents. These occupy little more than half the volume. The following 30 pages are devoted to the description of the exhibits including dietaries in many schools; and the last 200 pages, to miscellaneous material mentioned above, which is germane to the subject but was not presented at the conference. This section includes a description of "An Essex Village Health Center," the scene of the activities of the "Pudding Lady," who under the patronage of Lady Meyer is sent into the homes of the district to teach cooking; descriptions of the continuation classes conducted in the Cadbury and the Rowntree Cocoa Works; and a good article on "Clothes and the Child." Those who are specially interested in rural problems will find much of value in "How the Family of the Agricultural Laborer Lives," by Ronald T. Herdman, M.D., D.P.H.

The Delinquent Child and the Home. By Sophonisba P. Breckinridge and Edith Abbot. New York: The Survey Associates, pp. 360. \$2.

This book commends itself to anyone who has the well-being of the child at heart. It contains a study of juvenile delinquency which was made in Cook County, Illinois, the data used being the court records from July 1, 1899 to June 30, 1909; homes and parents were visited, probation officers interviewed, and school statements taken.

The introduction by Julia C. Lathrop states that when the Illinois law for the establishment of the Juvenile Court was passed in 1899, the child in court was a sign of the wastage of human life. Also the child was being demoralized by imprisonment for which there was no alternative but discharge or pardon. There was no constructive work.

The new court calls for different facilities from those of jails and prisons, and for officers of a different experience from that of sheriffs and bailiffs. The present drawbacks of the Juvenile Court are its newness, its need of wisdom based on longer experience, and its lack of adequate equipment. The authors designate their book as an "Inquiry" made for the purpose of a better understanding of the needs of all children, and a more intelligent judgment of the Juvenile Court in serving children. There are eight problems considered in order and at considerable length.

The problem of *adjustment* is due to several causes. Foreigners tend to segregate in separate national groups, which makes it difficult for them to be fitted into an American community. In their own land they were for the most part farmers; here they are engaged in work not at all connected with agriculture. The parents lack education and do not know how to protect their children against the perils which surround them.

Poverty is often a direct and compelling cause of delinquency. The investigation showed that 69 per cent of the girls and 38 per cent of the boys come from the very poor families. Nine-tenths of the girls and three-fourths of the boys come from the poor; less than one-tenth of the total come from the families in fairly comfortable circumstances; less than two per cent from those whose homes are apparently quite comfortable. Poor children are so often handicapped physically and mentally and cannot resist temptation when it comes. To quote, "When we see all the

background of deprivation in their lives, the longing for a little money to spend, for the delights of the nickel theater, for the joy of owning a pigeon or the glowing adventure of a ride on the train, it is not hard to understand how the simple fact of being poor is many times a sufficient explanation of delinquency."

The problem of *misfortune* includes the broken home, for which it is no easy matter to provide a substitute. The child has many temptations. At the same time there is a lack of wholesome discipline which the normal family gives. A young orphaned girl abandoned in the city may easily become delinquent. A step-parent often causes friction. Nothing can take the place of parental care and nurture.

In the case of *degeneracy* the body suffers with the spirit and seems to have no power of resistance. It is difficult to find these delinquents as well as to know how to treat them. Conditions are often discovered too late for effective treatment. "When taken in time action should be as swift and sure as it is intelligent and far seeing, since there is no time to lose."

Confusion is a subtle factor. Many children have no fair chance to acquire self control or develop a strong character. The oldest child of a family is often brought into court because of having to bear too much of the family burden or because the parents were so young when married that they had no sense of proper discipline. Children forsake overcrowded homes for the freedom of the streets, and sleep wherever they happen to be. Discomforts of home, step-parents, general incompetence and shiftlessness, complete lack of understanding and interest portray a pathetic condition. The probation officer becomes a welcome friend who helps bring order out of the disorderly home and gives advice not only about the children but about the management of the home as well.

The *school* is a necessary supplement to the home, but the great majority of poor boys leave school to assume pecuniary burdens. Often the first lesson the boy has in law-breaking is when the parent swears that he is fourteen years old when he is not. Temptations are great and varied, due to small amount of training and the impossibility of obtaining desirable work. The status of the girls was harder to obtain than that of the boys; but the information gained showed them to be more illiterate. The remedies are compulsory education, Child Labor Laws, and ungraded or sub-normal classes.

Because of *neighborhood neglect* the children of the poor have fewer facilities for recreation. The greatest number of delinquents are found in congested sections where there are few parks and playgrounds. Both boys and girls, especially girls, are victims of neighborhood conditions. It is a community duty to provide wholesome recreation for youth.

The problem of the *unmanageable boy* in cases where discipline is exercised at home proves that the bad boy is not alone the product of poverty and misfortune. He is led on by the spirit of adventure. The parents show too great leniency rather than the semi-brutal treatment that sometimes is found in the lower grade home. The gang influence in this class throws a halo of good comradeship and security over wrong doing.

The delinquent child is neglected by the home, the school and the community. "The lesson to be learned from any study of the Juvenile Court in its relation to the delinquent child is that the only way of curing delinquency is to prevent it."

The thirty statistical tables are full of interest and are worth a careful study.

Every phase of the subject is illustrated by short extracts from personal investigation. If any questions have arisen in the mind of the reader they are fully answered in the Appendix which contains Legal Problems Involved in the Establishment of the Juvenile Court, Testimony of Judge Pinckney, Abstract of Juvenile Court Laws, Family Paragraphs Relating to Boys, Family Paragraphs Relating to Girls, and Copies of Schedules Used in the Inquiry.

The Atmospheric Conditions of Workingmen's Houses in the Country in Summer. (*Das Wohnungsklima der Arbeiterwohnungen auf dem Lande in Sommer.*) By P. Schulz. Inaug. Diss., Univ. Greifswald, 1913, pp. 63, pl. 1, figs. 10.

This thesis contains a study of housing conditions in the country around Greifswald, Pomerania, with special reference to their effect upon infant mortality during periods of prolonged heat.

Different types of houses of brick, plaster, etc., with thatched and tiled roofs, etc., are described. Some data are included regarding methods of house-keeping, living conditions, and ventilation. In general, the author concludes that the infants were kept too warm, owing to housing conditions as well as to faulty methods of clothing them, and that this had an unfavorable effect on health and mortality.

Nutritional Physiology. By Percy G. Stiles. Philadelphia and London: W. B. Saunders Company, 1912, pp. 271, illus. \$1.25. By mail of the Journal, \$1.35.

Smooth, concise, expressive diction, apt parables, well-balanced presentation of thoroughly up-to-date matter and candid delimitation of what we know from what we guess are all characteristics one expects to find in Stiles' work. He has long been known as one of the ablest of the newer generation of writers on physiological subjects.

His new book exemplifies his admirable literary points and presents little to question seriously. Seeking earnestly for defects one is forced to confine oneself chiefly to regretting the omission of the more intricate matters which might have been included without confusion, when treated in the simple, direct manner of the writer, and, specifically, the absence of anything relating to vitamins, those little known but apparently important constituents of certain foods the absence of which seems to account for beri-beri, scurvy and perhaps other distinctly nutritional derangements.

Stiles is one of the few scientific writers who take pleasure, with great profit to their readers, in balancing off laboratory findings against the natural history of people in the mass. His shrewd comments on the relation of Fletcherism to vigorous old women (chapter xxii), and on alcohol (chapter xxiv) are models of correlating "field work" with test tube work.

If we may be permitted one mild gibe, the writer's tribute to the restraint of women at the table as compared with that of men, might well be offset by the reversal of their relative attitudes in the clothes shop: and we would respectfully suggest that, in future editions, the question why women's excesses run to the outside of the body, and men's to the inside might well be discussed.

We welcome this little book as a very valuable one for the consideration of non-technical students of the more thoughtful type, as well as for a large and growing class of older citizens who are more and more turning their attention to physical

efficiency and development. For the practicing physician who would absorb without too much effort or too much study of long forgotten technicalities the present developments of the subject of nutrition, the reviewer knows nothing better on the market.

Injurious Insects, How to Recognize and Control Them. By W. C. O'Kane. New York: The Macmillan Company, 1912, pp. 414, illus. 600. \$2. By mail of the Journal, \$2.16.

An entomologist has written this book for those who have no technical knowledge of insects. It describes pests of garden and field crops, of orchards and small fruits, of the household and stored products, and of domestic animals. It contains also description and information concerning the structure and life of insects in general, and information concerning various insecticides and other means of insect control. Besides this, specific directions for destroying the pest are given with the account of each species. The species described include those from other parts of the United States as well as from eastern states. The illustrations (original photographs) are very numerous and useful. The section devoted to household pests and those of stored products includes twenty-two pages. As over thirty species are mentioned in this space, not a great deal of detail is given to each, but the remedies suggested are most helpful.

How to Cook in Casserole Dishes. By Marion Harris Neil. Philadelphia: David McKay, 1912, pp. 252. \$1. By mail of the Journal, \$1.10.

The author first gives a definition of casserole, which differs slightly from our usual interpretation of the word. The use of the casserole as a labor-saving device, since both cooking and serving can be done in the same dish, is spoken of at length. Several commendable features of casseroles and their uses are mentioned, such as: the low cost of the utensil; an entire absence of all metallic contamination; the non-necessity for re-dishing the food as the casserole is ornamental enough to grace any table; the readiness with which it may be cleaned and its sanitary qualities, for no taste or odor of former cooking adheres; the retention of all flavors by the process of long, slow cooking; the ability to keep foods waiting for the delayed family without harm to the food. A few instructions as to care of casserole before its first use, care in the oven and on top of the range, are given. The remainder of the book is given over to recipes of dishes "en casserole." These include soups, fish, meat, vegetables, salads, puddings, cakes, and even pickles and preserves, and average about twenty for each division.

The One Maid Book of Cookery. By Mistress A. E. Congreve. New York: E. P. Dutton and Company, 1913, pp. 217. \$1. By mail of the Journal, \$1.08.

The value of this book lies in its fund of practical information on domestic arts principally dealing with food and its use and preparation. In cookery common sense can not be wholly relied upon. Some knowledge of the principles of food chemistry and food nutrition are necessary, together with practice and experience. Catering deals with the daily provision of food for the household. The author gives several happy combinations and substitutes of food as a help to the housekeeper. In shopping or selecting the raw materials, good quality always proves to

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be the economical. The book also gives excellent advice for the arrangement and care of kitchen, scullery and larder. A most interesting chapter on cookery methods and their principles precedes the many recipes of which the book is largely composed.

The Efficient Kitchen. By Georgie Boynton Child. New York: McBride Nast and Company. \$1.25. By mail of the Journal, \$1.35.

Occasionally a real contribution is made to the rapidly increasing literature on the subject of household efficiency. Such a one is "The Efficient Kitchen." It is a reliable, scientifically practical statement of how conditions may be transformed in any home, on any income, to make efficient work a possibility instead of the much-talked-of ideal.

One of the first genuine efforts to solve some of the problems pressed upon our attention by the increasing cost of living was that of the Housekeeping Experiment Station begun at Darien, Connecticut, some years ago by Mr. and Mrs. Barnard, and now being carried on at Stamford, Connecticut, by Mr. and Mrs. Alfred T. Child. It is from the results gathered from several years of experimental work, both practical and scientific, that this book has been prepared. The cordial credit that is given in the book to the pioneer work of Mr. and Mrs. Barnard is one of its most attractive features.

After much search for help in solving the problems of their early housekeeping Mrs. Child says, "Finally we came to the Housekeeping Experiment Station at Darien, Connecticut. Here at last we found what we had been seeking: an inexpensive but charming home which had been so transformed by engineering skill that it could be cared for with the minimum expense, and so equipped that it could be operated with the smallest possible amount of effort. Here we learned of two wonderful resources for preparing food, adapted to the income of the average home. Here we heard of Taylor's book on 'Scientific Management,' which has been revolutionizing the business world, and here we saw two old people living happily an ideal life in which labor and culture each had its rightful place. At last science and high ideals had transformed 'villian kitchen vassalage' into the noble profession of home-making." After a year spent with Mr. and Mrs. Barnard in a study of equipment, fuels and the best appliances for each, Mr. and Mrs. Child took over the Housekeeping Experiment Station.

The significant fact should be noted by every reader of "The Efficient Kitchen," that Mr. and Mrs. Child made no attempt to write a book until they had had years of work in this field, also that Mr. Child brought to the experiments the trained, educated mind of a chemist and a physicist, and Mrs. Child that of a woman of practical home, as well as business, experience. It is easy to write and talk glibly on the fascinating topic of household efficiency, without giving one word of real help to the housekeeper who knows it is absurd to talk of running a household on a railroad schedule, and who is perfectly aware that to follow the suggestions given would mean creating a new heaven and a new earth in the minds and hearts, habits and behavior, not alone of her own family, but of the stranger within her gates. It is not so easy to give advice and make proved statements which may aid every woman who heeds, yet Mrs. Child has succeeded in doing this.

In chapter III is fully explained the grouping of materials and utensils according to the uses they serve rather than in the old way according to kind (the agate ware utensils in one closet, groceries in another, cooked food in another, etc.).

Merely to read this is to convince a housekeeper of the older type that she has been on the wrong track all her life.

Chapter VI on hotwater heating systems is an excellent résumé of the various means in use for obtaining in the house the temperature necessary for comfort.

The chapter on the Business Side of the Kitchen will be found very encouraging to the woman who is striving to bring her finances into order but has little time to give to the task.

From the first definition, "Efficiency has meant in the past the power to produce results. It now properly means much more. It means power to produce the best results at the lowest cost of time, labor and materials," through to the end the book is definitely helpful and very readable.

Syllabus of Home Economics. (Corrected, January, 1914). Baltimore: American Home Economics Association, 1913, pp. 69. Paper, \$0.50; Cloth, \$1.00. (See Review in JOURNAL 6, 1914, No. 1, p. 87.) Publication No. 1 for the Ellen H. Richards Memorial Fund.

To meet the demand for the Syllabus, a reprint was necessary. Advantage was taken of this to introduce a few textual corrections and to amplify the last section of the Syllabus, "Household and Institution Management—Aims and Results," (p. 69) in accordance with suggestions which had been made since the Syllabus was published. The principal subdivisions of "Aims and Results" now reads: "Theoretical Considerations," "Physical Well-being," "Mental Discipline and Development," "Development of Normal Affections and Interests," "Inspiration," "Social, Moral and Spiritual Advancement."

The data grouped under "Theoretical Considerations" now reads: "Historical, general, and theoretical data; the ultimate purpose of the study of all home problems is the fullest and best development of the individual, the family, and the larger group; the home as the place in which one's affections center and where one finds refuge, rest, or satisfaction;" etc., the remainder of this paragraph being unchanged.

The changes in this Section are described in full in order that those who already possess copies of the Syllabus may, if they so desire, add to page 69 the few words needed to make it accord with the revised edition.

Childs' Recipes for Cooking and Preparing—Serving and Portion List. New York: Child's Company, 1913, pp. 90. Privately printed.

Recipes and directions are given for the preparation of a large number of dishes, particularly those adapted to restaurant service.

A portion and serving list shows the amount required for one service and gives brief directions as to the proper dishes and methods of service. In an appendix, rules for testing milk and the trade names of crockery and utensils are given, as well as a large amount of data regarding the number of fruits, vegetables, or other food materials in a barrel or box and the number of individual portions of cereals in a package, and information regarding the standards to be followed in selecting meats, fruits, and vegetables. This collection of data, evidently designed for private use, contains as a whole much of interest regarding the preparation of food in quantities and regarding restaurant service.

The pages are bound together in a loose leaf volume and for the use of the firm only.

The Grocer's Encyclopedia. Compiled by A. Ward. New York: 50 Union Square, 1911, pp. 748, pls. 80, figs. 373. Price, \$10.00.

This volume contains a large amount of data concerning foods, both animal and vegetable, their origin, preparation, and marketing, care of foods in market and in the home, as well as data regarding their use, and much general information. The volume was prepared as a reference handbook for grocers and general storekeepers.

The material is arranged alphabetically in encyclopedic form. A dictionary of food names in five languages is included, together with tables of weights and measures.

The colored plates and other illustrations supplement the text and add to the usefulness of the volume.

Report of the Commonwealth and States of Australia, Second Conference on Uniform Standards for Foods and Drugs. Melbourne: Govt., 1913, pp. 47.

General and specific standards and regulations are proposed with respect to foods, condiments, beverages, and drug products.

Especially noteworthy is the attention paid to the question of protection of food from contamination. Some of the suggestions along this line have to do with personal cleanliness, spitting and the use of tobacco, infectious disease, protection of food in vehicles, the return of food after it has been sold, wrapping the foods, protection from flies and dust and from rats and vermin, clean premises, sleeping rooms, and animals with reference to possible contamination, vehicles and appliances, drinking vessels and tableware, and table napkins in public eating places (a regulation designed to prevent the use of the napkin under such conditions until it has been thoroughly washed and cleansed).

New Ways and Old—A Manual of Cookery Especially Adapted to the Gas Range. By Elsie G. Caring. Rochester, N. Y., 1913, pp. 19.

A number of recipes are included, also tables indicating the amount of heat to be used and the time required for cooking the different articles.

Bakers' Bread. By P. Richards. Chicago, 1913, 3 ed., pp. 121, pl. 1.

This book is designed for the use of bakers. It contains numerous recipes for making a great variety of plain and fancy breads and rolls, together with short discussions of different kinds of flour and their use and of the preparation and use of bakery yeasts.

Feed, and Flavor and Texture of Cheese. By T. A. Ubbelohde. Dairy, 25, 1913, no. 291, pp. 74.

From experience and observation the author summarizes data on the effect of feed upon the quality of cheese.

Some feeds affect the texture and others the flavor of cheese. In handling the curd the affect of feeds on the texture can not be entirely overcome to produce a good waxy cheese, although a fairly good cheese may be made. The most troublesome feeds are those containing a large amount of oily or fatty matter. The cheese made from the milk of cows that had eaten acorns was found to develop a sharp acid flavor when about 4 weeks old, although its texture was good.

Technical Education Bulletins. New York: Schools of Technical and Industrial Arts and Household Arts, Teachers College. Price, 10 cents each.

This is a series of bulletins each of which may be considered authoritative on its subject. They are models of concise and simple statements. The series includes *Girl of Tomorrow*, *Household Management*, *Feeding of Young Children*, *Hints on Clothing*, *Determination of Cotton and Linen* (25 cents), *Dietary Study in Children's Hospital*, *Canned Foods: Fruits and Vegetables*, *Physical and Chemical Tests for the Housewife*, and *New List of Supplies and Equipment for Household Arts*.

Housekeepers' Manual. Department of Home Economics of Rhode Island State Federation of Women's Clubs, 1913, pp. 65.

The Home Economics committee prepared this pamphlet for distribution, by the clubs of Rhode Island, to housekeepers of the state. It is not intended for women of experience in well-planned housekeeping, but for those who have had little opportunity to learn the way to better living.

Helpful suggestions are given on sewing, cleaning, laundering, labor-saving devices, and methods of preparing and serving meals, together with a number of recipes. General directions for the care of the sick, the care and feeding of babies and children, the making and use of a fireless cooker, and living on the budget plan complete the informational part of the pamphlet. A list of books and government publications is added.

Outline Lessons in Housekeeping including Cooking, Laundering, Dairying, and Nursing: For use in Indian Schools. Washington: Government Printing Office, 1911, pp. 23. Price, 5 cents.

Although prepared for use in Indian schools, this publication may serve as an aid to teachers in other schools. It contains lists of reference books, text books, teaching and laboratory equipment, brief outlines for thirty-four lessons, and a tentative program for a week's work in a boarding school.

Training the Little Home Maker by Kitchengarden Methods. By Mabel L. Keech. Philadelphia and London: J. B. Lippincott Company, 1912, pp. 81, pls. 5, fig. 1. \$1. By mail of the *Journal*, \$1.08.

An outline of a two years course in housekeeping, one lesson a week, for girls between eight and eleven years of age. The book contains a list of articles needed in the course with their prices and the music and words of many kitchengarden songs.

A List of Books for Women in the Home and in Business. Seattle: Seattle Public Library, 1913, pp. 45. A limited number free.

The compiler of this list states in a short introduction that "women are studying their problems as never before, and it is because of this very keen interest of women in women that we hope this list may prove especially useful at the present time."

Under such headings as *Domestic Economy*, *Home Building*, *Cooking*, *Dietetics*, *Sanitation*, *Clothing and Textiles*, *Care of Children*, and *Economic and Social Relations*, selected lists are given of books by authorities on each subject. A list of magazines for women is found on the last page.

Choosing an Occupation: A List of Books and References on Vocational Choice, Guidance and Training, in the Brooklyn Public Library. Brooklyn: Brooklyn Public Library, 1913, pp. 63. Single copies free.

In this publication one finds selected lists of books and periodicals on the related subjects of vocational choice, vocational guidance, and vocational training. In the first division, vocational choice, the lists are arranged under specific occupations. There is also a list of other bibliographies on vocational subjects.

BOOKS RECEIVED

Practical Homemaking. By Mabel Hyde Kittridge. New York: The Century Company. \$0.60. By mail of the Journal, \$0.65.

The Craft of Hand-Made Rugs. By Amy Hicks. New York: McBride, Nast and Company. \$2. By mail of the Journal, \$2.10.

How to Buy Furniture for the Home. By Forrest Oiler. Indianapolis: Oiler Brothers. Postage prepaid, \$1.50.

The Fundamental Basis of Nutrition. By Graham Lusk. New Haven and New York: Yale University Press. \$0.50. By mail of the Journal, \$0.55.

The Oriental Cook Book. By Ardashes Keoleian. New York: Sully and Kleinteich. \$2. By mail of the Journal, \$2.10.

The Care of the Child in Health. By Nathan Oppenheim. New York: The Macmillan Company. \$1.25. By mail of the Journal, \$1.32.

The Development of the Child. By Nathan Oppenheim. New York: The Macmillan Company. \$1.25. By mail of the Journal, \$1.35.

The Mother and Child. By Norman Barnesby. New York: Mitchell Kennerly. \$1.25. By mail of the Journal, \$1.32.

First Book of Health. By Carl Hartman and Lewis Bibb, M.D. New York: World Book Company. \$0.35. By mail of the Journal, \$0.40.

The Human Body and its Enemies. By Carl Hartman and Lewis Bibb, M.D. New York: World Book Company. \$0.65. By mail of the Journal, \$0.75.

Industrial Education. By Albert Leake. Boston: Houghton Mifflin Company. \$1.25. By mail of the Journal, \$1.35.

Teaching Sex Hygiene in Public Schools. By Edith Lowry, M.D. Chicago: Forbes and Company. \$0.50. By mail of the Journal, \$0.55.

NEWS FROM THE FIELD

Pacific Conference of Home Economics. The last annual meeting of the Pacific Conference of Home Economics was held November 13, 1913, at Los Angeles. An address on Household Management was followed by a business meeting in which the officers for the year were elected. Much interest has been manifested in the work of the Conference during the year, and twenty-five members have joined since the fall meeting.

The formation of the two sections—Domestic Art and Domestic Science—has been an excellent idea as shown by the interest and good attendance at the monthly meetings of each section.

The Domestic Art Section has been making a special study of Textiles and Vocational Training for Girls. Members have visited stores, examined materials, and gained much information and help. They also secured men and women of practical experience in handling such materials to address their meetings on the subjects of millinery, dressmaking, linens, silks, laces and household furnishings.

The Domestic Science Section carried out their program in a similar way, taking up the subjects of food (meat, milk, etc.), markets, the Underwood tariff bill in its relation to economics, and methods of teaching domestic science.

The Home Economics Association of Greater New York. The regular meeting of the Association was held March 26, 1914, at Teachers College. Miss Van Rensselaer spoke on the subject, Home Economics and Rural Progress.

The demand for teachers in the rural sections, Miss Van Rensselaer said, is greater than in the cities at the present time and the requirements are high. The teacher must have had practical experience in order to speak profitably to a farm community. Miss Van Rensselaer believes that two of the great needs that the women in rural sections feel at present are, first, how to dress and furnish the home tastefully; second, how can woman's work be financially profitable. The first will satisfy her artistic cravings and the second enable the girl to stay on the farm and not feel the necessity for going into the cities to enter factories.

The meeting was well attended and Miss Van Rensselaer's address was appreciated.

The Association was invited to attend, on March 19, two food conferences arranged by the Bureau of Public Health and Hygiene and held at The Academy of Medicine. The meetings were very profitable.

Miss Hazen, in charge of the Gas Appliance Display Rooms entertained the Association in the Model Apartment on March 4. The new gas appliances were very well demonstrated.

The Omicron Nu Society. The Beta Chapter of Albany, N. Y., has thirteen active members, two of whom are faculty members. Meetings are held about every six weeks during the school year. At these meetings certain topics in Home Economics are considered. Thus far this year, the topics have been Pure Food

and Its Adulteration, Current Events in Home Economics, and the Consumer's League.

The exercises on Home Economics Day were planned by the Society, Miss Anna Cooley of Teachers College being the principal speaker.

New England Home Economics Association. The third regular meeting of the New England Home Economics Association was held at the Twentieth Century Club, Boston, on Thursday, March 5. The subject was Woman as a Purchasing Agent. The speakers were Mrs. Forrester Macdonald Lowell, How I Planned and Furnished my House; Miss Lillie C. Smith, The Cost of Food in Relation to its Nutritive Value (illustrated by a chart prepared by the pupils); Miss Frances Stern, Purchasing Food for the Immigrant Family; and Miss Annette Crocker, The Professional Purchasing Agent and Accountant.

The annual meeting was held at Simmons College in May.

Home Economics Day in Pennsylvania. For the first time, Home Economics Day was brought to the attention of thousands of women in Pennsylvania through *The Messenger*, the organ of the State Federation of Women. The day was observed in many places by a short review of the life and writings of Ellen H. Richards, which gave every one a new sense of obligation to our pioneer in Home Economics. The importance of the work to which she devoted her life is also being impressed upon the women throughout the state.

Seattle Home Economics Association. The topics for discussion at the meetings held during the year were: Market Regulations and Their Enforcement, Vocational Guidance, A European Trip, Hanging of Pictures in the Home, Violations of the State Food Laws, Illustrative Material for Textiles and Clothing, The Educational Value of Home Economics, The Work of the Industrial Centers.

In addition to the regular program, work has been carried on in investigating local market and factory conditions, and in preparing an exhibit for the Child Welfare Exhibit held in May.

The Home Economics Association of Philadelphia. The most important work of the current events committee has been the preparation and publication of a four page bibliography for Home Economics literature in current magazines and reports. The references are arranged under three headings: articles of general interest, articles for the school dietitian, and articles on foods.

The household science committee arranged for two meetings in April, as follows: April 6, at the William Penn High School, Bill of Fare Making, Miss Caroline Hunt; April 22, at Temple University, Budget Making, Miss Ethel Lamping.

The Graduate School of Home Economics. The Graduate School of Home Economics which was announced to be held at the University of Missouri during the summer of 1914, will not be held. The annual meeting of the American Home Economics Association which will be held in Cleveland early in July affords opportunities for reports, conferences and lectures which otherwise would be given at the Graduate School. It is hoped that the omission of the Graduate School will result in a larger attendance at the Annual meeting. Amy L. Daniels, Chairman of Committee on Graduate School.

Missouri Home Makers Conference. The State Homemakers Conference of Missouri is an organization of women which holds its annual meeting in Columbia in connection with the Home Economics Department of the University. The work of this Conference is divided into several departments, one of which is that of Child Welfare.

In this department only three lines of interest were selected this year. One session was given to art and music in the home. Another meeting was devoted to papers and discussions of moral and ethical training in the home. The third meeting was one on games and amusements for children and with it was held a baby health contest. The children from the elementary school of the State University gave an exhibition of games such as ten pins, bean bags, three deep ring toss, and basket ball. Some Mother Goose rhymes were dramatized, and a number of folk dances were given.

The baby health contest was instituted in order that the babies of our state might receive more attention. It was conducted without prizes of any kind, and the babies were protected from publicity in every way. The score card used was furnished by the Physiology Department of the State University and is an attempt at measuring the child's physical and mental development. The anthropometric measurements were made by persons of experience and skill. The medical examination was given by the Dean of our State Medical School, who is a specialist in eye, ear, nose and throat disease.

The score cards, when completely filled out were mailed to the parents of the babies. The front of the card contained the eugenical history of the child, and a set of rules for preservation of the health of the baby.

This whole movement has been characterized by the absence of any comparison of children, of any commercialism, or any of the spectacular, or sensational element. No attempt was made to give medical advice, though an attempt was made to give intelligent answers to questions. Where the need of a doctor's care was indicated the attention of the parents was called to this fact.

Sixty babies were entered, and they included all strata of society. These babies averaged higher than Holt's standards and a little lower than the Colorado babies as reported in the newspapers.

This contest impressed one strongly with the fact that parents, while ignorant on what modern science says about the care and culture of babies, are most anxious to learn all that they can on this subject and that until we find some means of bringing this information within the reach of all parents we must not hope to materially lessen our infant mortality.

Household Arts Alumni Conference at Teachers College. Seven hundred alumni of Teachers College, Columbia University, celebrated the twenty-fifth anniversary of that institution, February 20-21, with an educational conference in which one section was devoted to household arts. About one hundred and fifty persons interested in household arts teaching gathered for the following program:

What the Society for the Promotion of Industrial Education is Doing at the Present Time, with Particular Emphasis upon the Work for Girls, by Miss Cleo Murtland, Assistant Secretary, National Society for the Promotion of Industrial Education; The Women's Educational and Industrial Union and Simmons College, by Prof. Mary Schenck Woolman; Household Arts in a Children's Home, by Mr.

R. R. Reeder, Superintendent, Orphanage, Hastings-on-Hudson; A Bit of Historic Costume, (illustrated with stereopticon slides), by Miss Jane Fales, Assistant Professor of Household Arts, Teachers College.

In addition to the educational conference, a meeting of the graduates in Household Administration was held, bringing together about forty former students. Reports were given by young women engaged in conducting a laundry, a tea room, women's clubs, visiting housekeeping work, factory welfare work, the work of manager of a university, and other new fields which are opening in administration.

Massachusetts Agriculture College, Extension Service. Home Economics extension work has for the first time been organized on regular lines during the past year. The first activity undertaken was the summer school in July. The courses offered were of two types—one adapted to those generally interested or actively engaged in home making, the other designed to help teachers of schools in small villages where meager facilities only are available for teaching the subject. For three days immediately following the close of the summer school the Conference for Rural Community Leaders was held and a woman's section was a part of each morning's program.

Ten Extension Schools were held, each one lasting from Monday until Friday. The expressions of appreciation received at the close of each school, the regularity of attendance, and the increasing membership as each day passed were conclusive evidence of the value of the work.

Of a different nature are the "Community Schools," of which two have been held. Here the problems of the group were emphasized rather than those of the individual as in the regular extension schools. In each, two periods were devoted to the women's work in the community and in the home.

During the annual Farmers' Week in March, the woman's section registered 460 with an average attendance at the section meetings of 195. Prominent among the speakers were Dr. Benjamin Andrews, of Teachers College, who spoke on *The Economic Phase of Household Management*; Dr. Evangeline W. Young, of Boston, who talked on *Sex Hygiene*; Miss Bertha M. Shapleigh, of Teachers College, who demonstrated cookery. The New England Home Economics Association had charge of one afternoon's program.

The State Grange, the Home Economics Department of the Massachusetts Federation of Women's Clubs, and the New England Home Economics Association have coöperated, and this coming year a carefully prepared program is to be given so that true constructive work may be accomplished. Girls' Home Economics Clubs have been organized under the joint supervision of this department and that of Agricultural Education. It has not been possible to accept all invitations to speak before granges, clubs and alliances, but a number of such addresses have been given.

New Hampshire College. New Hampshire State College began the organization of a department of Home Economics in May, 1913. The work was placed under the direction of Miss Helen B. Thompson and classes were opened in September. A splendid equipment was installed during the summer. In response to the announcement of the course the enrollment of women increased to double the number for the preceding year. Sixty-three women have been registered, most of them taking work in the department and many of them entering the full course.

The course in Home Economics is one of three courses in the arts and science division and is so arranged as to be technical for students wishing a professional training, or elective for arts and science students who desire a more general course.

The women's dormitory has been filled to the limit of its capacity and plans are under way for an addition to the building for next year.

It is evident that New Hampshire is thoroughly interested in this phase of education. The high schools and academies are rapidly putting Home Economics into their courses; there are frequent calls from women's clubs, granges, and farmers' and teachers' institutes for lectures on the subject, and at the Annual Farmers' Week, held at the college, January 26-30, there was an enthusiastic attendance, at the woman's section, of both men and women from all parts of the state.

Illinois Woman's College. The department of Home Economics is growing very rapidly. In 1911 Miss Lucy H. Gillett became director and completely revised the work, putting it upon a thoroughly scientific basis. She established the four-year course leading to the degree of Bachelor of Science, and there is a steady increase in the number of students entering for this course.

Miss Florence H. Churton succeeded Miss Gillett in September last, as the latter resigned to spend the year in study at Columbia University. Miss Bettina Leicht, of the Albany Normal College, has charge of the work in household arts.

The Woman's College Guild of Jacksonville has recently given the money with which to purchase a large number of books for the Home Economics library. On March 8, the members of the guild with the entire college faculty visited the department, to see the regular classes in session and an exhibit of work done in sewing and handwork.

Johns Hopkins Summer School. Among the courses to be given at this university during the summer are the following:

Elementary Cookery, Miss Harris. The aim of this course is to give a working knowledge of the elementary principles of cookery.

Methods of Teaching Domestic Science, Miss Harris. In the class work the following topics are treated: educational value, the place in the curriculum, equipment for teaching courses of study, planning lessons, and methods of presenting work by demonstrations. Opportunity will be given for practical work in teaching a class in domestic science.

Household Chemistry, Professor Gilpin. This course is intended for those who have taken courses in elementary chemistry and domestic science. It will include a study of fuels, combustion, oxidation, air, water (its analysis and purification), food principles, preparation and testing of food, and preservatives.

The Parents' League. It will be good news to many a puzzled father and mother that there is a movement on foot to form societies whose aim shall be "to unite parents in an effort to promote the moral, mental and physical well-being of their children by establishing wholesome standards in matters affecting their education, amusements and home life."

The Parent's League of New York City was organized last December and was the outgrowth of a meeting of parents and teachers to consider "how to solve the theater problem and the late hours indulged in by young boys and girls."

"By means of the coöperation of parents the league hopes to make it easier for the individual parent to establish somewhat more rational and simple occupations and amusements for children during the hours when they are not in school, and during the holidays. Its purpose is not to reorganize the home, but to influence conditions outside the home."

To quote from the literature sent out by the Boston League of the same name: "it is an effort to anticipate the need of reform; to counteract the tendency of the social impulse, which, like a dancing dervish, excited by its own motion, increases its velocity with every turn.

"As a matter of fact, many of us feel very diffident as to our ability to decide in each new instance for our children, the question of their relation to the ever-changing suggestions and opportunities of the day. Each of us is confronted almost daily with a new problem, inseparable from the growth of our particular child, and differing from all questions which have preceded it; and it seems to us well that we should make for ourselves an opportunity to discuss these things, and to come to some conclusions founded on our own combined best judgment, as to the ways of meeting the questions of the hour, and of placing the future of our children, mentally, morally, physically and socially, that is to say in all human relations, upon the best possible basis."

At a late meeting of the New York League the following recommendations were adopted:

"That boys and girls of school age refuse all invitations to parties, theaters, etc., during the school term, except occasionally, on Fridays and Saturdays, and that parties and theater going be limited during the holidays.

"That parents arrange simple and appropriate forms of recreation for the children; for instance, attendance at young people's concerts, visits to the country, museums and places of interest; and that they reserve time during the holidays to join their children during such recreations.

"That parents advocate reasonable hours for beginning and ending dances for young people, that they state them in all invitations, and that they carefully supervise the manner of dancing.

"That a theater committee send bulletins at regular intervals to all the active members of the league, suggesting the most suitable plays for young people. That parents in sending invitations to the theater state the name of the play.

"That parents confer frequently with the teachers of their children regarding questions affecting their education and general welfare, and that they coöperate with the teachers in upholding the rules and standards of the school.

"That articles bearing on vital questions relating to the up-bringing and education of children be circulated among the active members of the league, and that the members hold informal meetings for the discussion of these questions.

"That coöperation be sought of such organizations as the Junior League and the alumnae associations of the schools, in order that sons and daughters may work in sympathy with their parents toward a common end."

These leagues have started among wealthy people in coöperation with the private schools but their usefulness would seem to be apparent all along the line. Parents, no matter how independent, often find great difficulty in enforcing standards that do not prevail among their children's friends.

Relief Society Grocery. The change from the corner grocery to their own grocery, resulted, during ten weeks, in a net saving of 22.8 per cent of the amount ordinarily spent for food by the New York Relief Society. Besides this saving, the new method makes it possible for the dietitian to arrange a wholesome, varied, and nutritious diet for the needy families.

The visitor, after finding out the needs of a family, goes to the central office and by referring to the dietitian's guides gives an order for her particular family for a day's or a week's supplies. All orders are sent from the offices to the store and the goods delivered to some sections every day, to others, twice a week.

National Organization of Nurses. The annual convention of the National Organization of Nurses of the United States met in St. Louis, April 23-29. At this convention were assembled the three branches of the national organization—The American Nurses' Association, the National League of Nursing Education, and the National Organization for Public Health Nursing.

The Red Cross joined with the other associations in St. Louis in preparing an exhibit of charts, laboratory equipment, and materials representing teaching and hospital work, public health nursing and medical social service.

Methods of teaching, approved schools of nursing and their entrance requirements, standardization of nursing, public health nursing, private nursing, and other topics of interest in the nursing field were discussed.

International Congress on Home Education. The International Congress on Home Education was organized in 1905 under the patronage of the Belgian government. After three European Conferences, the fourth is announced to meet in Philadelphia, September 22-29, under the auspices of the International Commission. The members of this commission appointed by the United States Government are: Mrs. Charles Henrotin, Honorary President of the General Federation of Women's Clubs; Professor M. V. O'Shea, University of Wisconsin, and Professor Will S. Monroe, State Normal School, New Jersey.

The program of this congress will be in charge of the chairmen of sections, as follows: Child Study, Dr. G. Stanley Hall; Family Education, Mrs. Frederick Schoff, President National Congress of Mothers and Parent Teachers' Associations; Subjects Relating to the Child Before School Age, Miss Lucy Wheelock, Kindergarten Training School, Boston, Mass.; Subjects Relating to the Child During School Age; Subjects Relating to the Child and Youth After School Age, Dr. David B. Snedden; Subjects Relating to the Abnormal and the Physically Handicapped Child, Dr. Walter S. Cornell, Chief Medical Inspector, Board of Education, Philadelphia; Various Organizations Relating to the Welfare of Childhood and Youth, Children's Courts, Associations to Fight Tuberculosis, etc., Dr. Harlan Updegraff, University of Pennsylvania; Literature and Documentation; The Home and the School in Coöperation for the Education of the Child, Dr. P. P. Claxton, United States Commissioner of Education.

Prominent men and women who will participate in the program are: Miss Julia C. Lathrop, Judge Ben Lindsey, Dr. Graham Bell, Dr. Charles De Garmo, and others. Besides these educators from the United States there will be representatives from every country of North and South America and Europe.

This promises to be the greatest congress on the welfare of childhood and youth that has ever been held in any country.

Congress on Child Welfare. Men and women of international importance who are interested in child welfare were brought together by the Third International Congress on the Welfare of the Child. This Congress met in Washington, April 22-27, under the auspices of the National Congress of Mothers and Parent Teachers Associations.

Representatives from China, Japan, Bulgaria and other foreign countries as well as noted men and women from all parts of the United States took part in the discussions on vital subjects connected with child welfare. Some of these topics, which were divided into sub-topics, were: The Relation of the School, the Church, and the Home to Child Welfare; Education for Home Making; Opportunities for parents to Obtain Instruction in Child Nurture and Home Making; and The Nation's Protection of Home and Family.

The Florida Canning School. The organization of Canning Clubs is a definite part of the Home Economics work of the Florida State College for Women. A network of influence has been effected by the formation of clubs in twenty-six counties each with its county agent who reports directly to the department of Home Economics. Under their supervision there are 1600 girls, planting, canning and doing other things at home.

Once a year the agents meet at the college for a week's instruction in canning, marketing, etc. This year's canning school was held March 9-11 with a program that included reports from the county agents, canning demonstrations, and discussion and lectures on Agriculture in the Northern part of Florida, Tomato Culture in Florida, the Development of Canning Club Work in the Southern States, Standardization of Club Products, and Reports, Exhibits, and Methods of Organization.

The Alexandra Trust. The Alexandra Trust is an Institution in London founded by Sir Thomas Lipton who gave a sum of over £70,000. The management plan to cover their expenses but have a fund available so that should the markets at any time be against them they could still supply food at the usual prices; but there has been no occasion so far. The food served is of excellent quality and every care is taken in its preparation.

They have had a contract for years past to supply breakfasts and dinners to needy children provided by the London County Council. They supply a two course dinner to poor children belonging to the Hoxton Mission, at 1½d per head, daily. They use about 5 cwt. of haricots, 1½ cwt. of butter beans and 6 cwt. of peas a day, and bake 7000 big loaves of bread a week.

Their card of prices shows the following: tea, coffee, cocoa, per small mug, ½d; slice of bread and pure butter, ½d; roll and butter (pure), 1d; toasted tea cake, 1½d; half toasted tea cake, 1d; poached egg on toast, 2d; 2 poached eggs on toast, 3d; rashers of bacon, 1½d and 2d; rasher and 3 eggs, 4d; porridge and milk, 1d; salmon and sardines, 1d; cakes and pastries, ½d; kippers, each 1d, per pair, 1½d; haddocks, 1d, 1½d, and 2d.

Their vans delivering the food for London County Council service are many and go to all districts of London, as far as six or eight miles out. The food is packed in boxes specially constructed to retain the heat, so that hot food is served to the children.

Social Service Congress. The accredited delegates to the National Social Service Congress, held at Ottawa, March 3-5, numbered about eight hundred. Great interest was manifested, and the interest has spread throughout the Dominion.

His Royal Highness The Governor General, the Right Honorable R. L. Borden, Prime Minister, and the Right Honorable Sir Wilfred Laurier, ex-Prime Minister, addressed the congress. Four other members of the Government were on the program. Two distinguished American speakers of world-wide repute contributed very highly to the inspiration of this remarkable gathering—Professor Graham Taylor, of Chicago, and the Rev. Chas. Stelzle, of New York. Each gave three addresses, one by each speaker being given at a luncheon in the palatial hotel, the Chateau Laurier. The dining-room which seats four hundred and fifty guests could not accommodate all who wished to hear the addresses.

Canada is keeping pace, at least, with the rest of the world in the great social awakening, and the congress at Ottawa has given social service in all its aspects a new and much higher standing alike with the people and with the Parliament of Canada. This congress was held under the auspices of the Social Service Council of Canada which comprises eleven different religious and philanthropic bodies.

Art in the Home. Many cities are realizing that their libraries and museums ought to bear a more definite relation to the home. To this end they have arranged exhibits of textiles, tapestries, vases, etc. Referring to such an exhibit the *Outlook* for February 7, says:

"Many teachers have visited the exhibit, taking away valuable suggestions for class work. For instance, linoleum as an art fabric is practically unknown in this country. In this direction the exhibit suggests possibilities of bringing floors into harmony with walls and ceilings, not always attained with rugs, carpets, and wood; furthermore, the fabric is economical and hygienic. There is no reason why art in a home should be confined to one room, any more than that one day of the week should be set apart for being good. Every object and phase of life, through adaptability to the use for which it is intended, may be made harmonious, and so artistic. This movement of industrial art, rightly applied to daily routine, may do something towards making the living of life itself the greatest of all arts."

Mr. Dana, Director of the Newark Public Library has organized a circulating museum. It is his idea to loan articles to homes and thus develop a love of the beautiful. He also has free exhibits in which is shown the value of the usefulness of art objects. He believes that oil paintings do not have so close a relationship to the development of good taste and refinement among people as do the genius and skill that have gone into the perfecting of household objects.

Life Extension Institute. "The Life Extension Institute" has been organized by a group of active men who feel that unapplied theories are of little value. Ex-President Taft will be chairman of the Board of Trustees, and Colonel Gorgas will be Chief Consultant in Sanitation on the Hygienic Reference Board.

Of the work of the Institute Professor Fisher says: "The purpose of this Board is to help determine the truth on hygienic questions referred to it. The method to be used to prolong life is very simple and the same as applied to ordinary machinery—inspection and repair. After the human machine has been inspected the individual will be advised to see his family physician, who will furnish a full statement of the results of the examination."

THE BIENNIAL, GENERAL FEDERATION OF WOMEN'S CLUBS

Home Economics Day at the Biennial occurs on June 15 in connection with that of the closely allied department of Public Health. In the morning session the reports of both the Public Health and Home Economics chairmen will be given, and each department will present a speaker. Dr. Philander P. Claxton, the United States Commissioner of Education, will speak for the Home Economics Department on The Educational and Cultural Value of Home Economics.

In the afternoon of the same day the two departments hold separate conferences. The topics to be presented for discussion are as follows: The Greatest Need of the Home Today; Difficulties Encountered in Interesting Clubs in Home Economics; and the subject of Clean Food.

All three topics are for open discussion in which those who are not club members, but whose work is well known, have been invited to participate. We will have with us Dr. Carl L. Alsberg, Chief of the Bureau of Chemistry, and Dr. C. F. Langworthy, Chief of the Division of Nutrition, Washington, D. C.; Miss A. B. Wimple, State Bakery Inspector, Olympia, Washington; Dr. John H. Long, Medical College, Northwestern University, Chicago, Illinois; Dr. Herbert D. Pease, of the Lederle Laboratories, New York City; Dr. Benjamin R. Andrews of Teachers College, Columbia University, New York City; Mr. W. Scott Matthews, Food Commissioner of Illinois; Dr. Harry Barnard, Food Commissioner of Indiana; Mr. Harry Snyder, author of "Human Foods;" and others.

Some of those who will be present, and who have particular interest in the Home Economics world, are Mrs. Mary H. Abel, Editor of THE JOURNAL OF HOME ECONOMICS; Miss Isabel Bevier, Professor of Household Science, University of Illinois; Miss Abby L. Marlatt, Professor of Home Economics, University of Wisconsin; Dr. Amy L. Daniels, University of Missouri; Prof. Marion Talbot, University of Chicago; Mrs. H. M. Dunlap, Ex-President of the Household Science Department, Illinois Farmers' Institute; and others.

The discussion of clean food will be opened by Mrs. O. G. Ellis, Vice-Chairman of the Public Health Department. This work of food sanitation was under the direction of the Public Health Department until within the past six months. It was transferred to the Home Economics Department by action of the Board of the General Federation at the request of Mrs. Crockett last December. Its most able sub-chairman, Mrs. McKibben of Grant's Pass, Oregon, was continued in office with her committee and Mrs. McKibben will be present to tell of her work.

The discussion of The Need of Greater Uniformity in State Food Laws will be opened by Dr. Alsberg, and the subject of Clean Food by Miss Wimple.

On Wednesday afternoon, the seventeenth, there will be a meeting of the State Chairmen of Home Economics. Seven of this number and the chairman of the General Federation are trained Home Economics teachers, four more have had years of experience in many phases of this work, and two others both practical and club experience of many years. It is a strong, responsive and representative committee.

This committee urges the readers of the JOURNAL who are members of clubs or teachers of Home Economics, who can or will be in Chicago at this time, to join in the conferences and aid in the discussions. Helen Louise Johnson, Chairman.

THE Journal of Home Economics

Home, Institution, School

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The Journal of Home Economics is published five times during the year, February, April, June, October, December, by the American Home Economics Association.

\$2.00 A YEAR. FOREIGN \$2.25. SINGLE COPIES 50 CENTS.

HOW TO REMIT. Remittances should be sent by Draft on New York, Express Order, or Postal Money Order, payable to the American Home Economics Association. Currency, unless mailed in a registered letter, is at the sender's risk.

CHANGE IN ADDRESS. Notice of change in address should be sent Two Weeks before the date of issue on which the change is to take effect. The change cannot be made unless the subscriber's Old Address is clearly indicated in addition to the New Address.

AMERICAN HOME ECONOMICS ASSOCIATION
ROLAND PARK BRANCH, BALTIMORE, MD

Entered as second class matter at the Baltimore Post Office.



Portrait of Count Rumford when sent to England as Ambassador from Bavaria. 1798. Aged 45. (See page 344.)

Courtesy of American Academy of Arts and Sciences, Boston, Mass.

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LATIN AS A VOCATIONAL STUDY

Under the above title Mr. Albert D. Perkins, head of the Department of Ancient Languages in the High School of Dorchester, Massachusetts, presented a paper last April before the New England Classical Association. It will appear in full in the *Classical Journal* for October. Meanwhile, with Mr. Perkins' consent, we quote for our readers from a partial report which appeared in the *Boston Teachers' News Letter* of June, since the paper records a most interesting experiment.

Mr. Perkins has applied very practical tests to a question that has suffered much from the theorizers, as witness certain recent discussions of the value of classical studies, in which too often the memories of a long past youth are made to do duty for argument, and the words "classical" and "vocational" are set up against each other as natural enemies. Mr. Perkins' attack was direct, his method admirable. He set himself one task, to decide whether two years of the required modern language study in the curriculum could be advantageously exchanged for the Latin to be taught with the special end in view of improving the student's grasp of English, and thus his chances of success in a chosen career. It seems that business men are complaining more and more that the graduates of high schools cannot spell and have only the most limited knowledge of the meaning of words.

Miss Blanchard, the teacher of salesmanship in the Dorchester High School, who also has an evening class in Business Administration composed of employees in Filene's store, goes even further. She states that it is found in the work down town, that the chief obstacle to promotion is ignorance of English; that is, lack of knowledge of the meaning and use of words derived from the Latin. To quote Miss Blanchard: "The success of a salesman or business man is found in actual practice to be directly proportioned on the one hand, to ability to understand what the other man has to say, and on the other hand, the ability to convince him of the superiority of the goods offered for sale, or the advantage connected with the business proposi-

tion in hand." In short, other things being equal, it is vocabulary which holds the key to success. This fact is recognized by the educational department at Filene's and as a result every night the members of the evening classes bring in for explanation and study, lists of words they have heard during the day, but have not understood. These words, sometimes amounting to as many as forty are almost entirely of Latin origin. Thus, you see, we are confronted not with a theory, but with a condition, as it actually exists in the fierce competition of the business world of today.

To quote another teacher, Miss Ripley, "A broad, flexible, discriminating vocabulary is a prime business asset. In my opinion, the time is coming to an end when the crude, uneducated tradeswoman can succeed."

In the spring of 1912 the experiment was begun in the commercial department of the Dorchester High School, with one section of the pupils, 40 in number. The second year the teaching was given to four sections, numbering about 165. Mr. Perkins took the class himself and he says that apart from the usual routine of mastering forms and syntax (for he was determined that the course should be a serious study of the Latin language) he tried to emphasize two things.

First, very many written translations in which much stress is laid upon correct English; and second, a study of the meaning and use of words derived from Latin, taking the Latin words of the vocabularies—and the authors read—as a basis. The English words are classified as to parts of speech, and spelled (over and over again, if necessary), their meanings are traced from the Latin; and finally, English sentences are written containing the words correctly used. A careful record is kept in notebooks provided for the purpose. They get most of the derivatives from their English dictionaries. I try to give them as few words as possible, myself, in order that the spirit of investigation and discovery may help to keep up the interest. As a matter of fact, the interest aroused by these discoveries has been unequaled by anything else I have observed in the classroom in recent years. The words must be recorded correctly, and reviewed, both orally and in written exercises, until fixed. Even then, of course, it will be impossible for every pupil to know all the words, however much one may try to hammer them in.

The English department in the Dorchester High School is naturally interested in the experiment. I was not a little pleased the other day when an English teacher remarked that the new course seemed to have justified itself already, since the pupils were forever consulting their English dictionaries.

Mr. Perkins goes on to say that a year ago Latin was also introduced into the department of dressmaking and millinery by Miss Ripley, the teacher in charge.

As to the method Mr. Perkins continues:

Syntax is studied only to the extent of making clear the meaning of what is read, and lists of English derivatives are made from every available Latin word met in the

course. These derivatives are classified as to parts of speech, defined, and later embodied in sentences composed by the pupils. The number of derivatives in most cases is surprisingly large. Few Latin words yield less than half a dozen, some as many as 60 or 70, while *facio* gave the astonishing number of 156.

The pupils begin with the root or base of the Latin word, and then run through with the prefixes. For example, in *scribo, scriptus, scribere, scripsi*, they find what they can in the English dictionary from the two stems *scrib* and *script*, and then hunt up other words, taking the prefixes in alphabetical order. We thus lay much stress upon prefixes, and as a matter of fact, after a few months have a typewritten list of them pasted on the inside of the cover of the note-book for easy reference in looking up derivatives. Just here is a point. Since in the study of stenography, many of the Latin prefixes and suffixes, and not a few Latin words, are represented by definite phonographic signs, the commercial pupils who have studied Latin, when they come to phonography in the third and fourth years, have a distinct advantage. In fact, this year five or six fourth-year commercial pupils, who had not had my training, entered the Latin class, primarily that they might master these phonographic signs with greater facility.

The last two years of the class are to be devoted to a modern language, and I am not without hope that the language power developed by the two years' study of Latin may enable the pupils to read nearly as much French or German as if they had taken the modern language from the start.

Finally it was found possible to make an actual test of the value of the Latin training by selecting two sets of pupils of equal ability, one set in the second year of Latin, and the other in the second year of a modern language. Accordingly, we chose pupils such that each group had virtually the same average mark in Latin, on the one hand, and modern language, on the other, and also in English, with the result in actual figures that the non-Latin group in the two studies averaged 0.5 of 1 per cent the higher. To make doubly sure that the Latin pupils were not favored, the non-Latin group were taken from the section of Mr. Murdock, a classical scholar, who in his English teaching emphasizes the Latin element in the language. There were 21 pupils in each set, all in the second-year-class of the school.¹

The results of the six measurements were as follows:

January and February 1914.

	Latin	Non Latin
Spelling.....	82.5	72.6
Use of words in sentences.....	57.5	49.6
Definitions and parts of speech.....	69.5	33.3
Meaning of words and spelling.....	57.0	27.5
Excellence in vocabulary.....	36.0	6.8

June 1913

Meaning of words and spelling.....	65.3	12.3
	6) 367.8	6) 193.1
General average.....	61.3	32.18

61.3 - 32.18 = 29.12 in favor of the Latin trained.

¹ For the details of the text the original paper must be consulted. The utmost precautions were taken to insure that those of the Latin course should not be favored.

In these six tests, the blundering and groping in the dark on the part of the non-Latin students would be ludicrous but for the tragedy of it all. For example, one pupil said of *concussion*: "An accident; leaves some people with a disease of the brain." A second gave this meaning of *resonant*: "To be firmly fixed in a certain resolution." Again *potent* was explained as "something which hangs overhead; hence, a warning." By another *militant* was defined as "a woman who destroys everything within her reach; a suffragette." Still another defined *intervention* as "an invention of something invented before;" and, finally, a youngster capped the climax by explaining *pendant* as "a Harvard-Yale game."

This experiment makes a definite contribution to our show list of proved and tested methods. It has aroused great interest, and many believe that it points out the way in which the ancient languages are to be reinstated.

THE SMITH-LEVER BILL

From the *Experiment Station Record* of May, 1914, we abstract the important points concerning this bill, which has so much of interest for students and teachers of Extension Work in Home Economics.

This new measure is the sixth act which recognizes agriculture as an appropriate subject for promotion by the Federal Government, and the fifth to provide permanent grants from the public Treasury to be used through the system of state institutions established by the Morrill land-grant of 1862.

Former acts have so educated the public that this one has been passed in response to a widespread demand. Farmers, speaking through their various organizations have been especially eager for it, and there is a general recognition that this bill will make for the improvement of the country's greatest industry and conserve our national resources for posterity.

The growth of the bill may be traced back to 1906 when the committee on extension work of the Association of Agricultural Colleges and Experiment Stations made its recommendation that each Agricultural College should organize such a department. In 1910 a bill was passed which enabled federal state forces to coöperate and as the work progressed, the conviction grew "That agriculture was not keeping pace with modern progress and that added means were indispensable for reaching and influencing the mass of farmers on the land."

The present bill which was passed by Congress last winter and signed by the President in May, is the fiscal expression of several different bills that have been under discussion for over two years.

The Act provides that "in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics and to encourage the application of the same," there may be inaugurated in connection with the colleges receiving federal aid under the Morrill acts, agricultural extension work to be carried on in coöperation with this department. This work is to consist of "the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said college in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise."

For the maintenance of the work there is permanently appropriated \$480,000 per annum, or \$10,000 for each State which accepts the provisions of the Act. In addition, there is appropriated \$600,000 for the second fiscal year of its operation, and for each year thereafter for seven years \$500,000 additional, until a total of \$4,100,000 is reached, which with the \$480,000 makes a total of \$4,580,000, and continues as a permanent annual appropriation. Unlike the initial appropriation of \$480,000, these additional appropriations are to be allotted annually to each state by the Secretary of Agriculture in the proportion which its rural population bears to the total rural population. They are also conditional upon the provision by the States of an equal sum for maintenance of the work, supplied either by direct appropriation or contributions from the county, college, or local authorities, or from individuals within the State.

The Act further provides that the extension work authorized is to be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the colleges.

It is specified that in States where there are two or more colleges receiving the benefits of the Morrill acts, the legislatures shall designate the institutions to receive the appropriations. No part of the appropriation can be used in the purchase, erection, or repair of buildings, the purchase or rental of land, college course teaching, promoting agricultural trains, or other purposes not specifically authorized, and not more than 5 per cent for the printing and distribution of publications.

In one respect, the measure is unusually broad; it recognizes the home and the home maker and the general conditions of country living, the term "Home Economics" formally appearing in federal legislation for probably the first time. It is, therefore, a recognition of the American home maker and of the worth and dignity of the vocation which she represents, as well as an acknowledgment of the great importance of farming.

The question has already arisen, "What proportion of this money is to be available for extension teachers of Home Economics?" In one department of the work, the Canning Clubs of the South, the need seems to be pressing, for the funds from the General Education Board which have financed them up to the passage of the Smith-Lever Bill, are no longer at their disposal.

But there is every reason to think that no injustice will be done. The great fact is that in thus seeking to promote the general welfare by a comprehensive and permanent system of extension work on the farm and in the home, the Federal Government becomes an active coöperator in the campaign for rural development and progress which has made such remarkable headway within recent years. Plans for the expenditure of this money are not wholly in the hands of the Agricultural Colleges. They are to act in coöperation with the Department of Agriculture. As fast as the leaders in Extension Work in Home Economics can mature their plans and train their teachers, they will undoubtedly receive their share of this fund. It should be remembered that the first appropriation of \$10,000 per State will not go very far. Much of it will be spent in creating or perfecting the organization for extension work. The tendency will be to put a considerable share into enterprises already begun. The demand for county agents is so great that this will absorb the fund until the counties generally have such agents. Meanwhile the friends of Home Economics should study the situation, formulate reasonable plans for extension work among farm women, get into sympathetic touch with the officers in charge of extension work at the colleges, exert steady pressure for Home Economics work and prepare the way for its spread.

CONTENT OF HOME ECONOMICS COURSES

Those who attended the Cleveland Meeting had the pleasure of listening to brief addresses from Dr. P. P. Claxton, United States Commissioner of Education and Dr. David Snedden, Superintendent of Education of the State of Massachusetts. Extracts from Dr. Snedden's address will appear in the December JOURNAL.

Dr. Claxton expressed his interest not only in his official capacity, but his personal interest, as a citizen, in Home Economics as a branch that meets the most foundational requirement of true education, in that it is intimately connected with the daily life. He held that the raw material of education must be the past and present experience of those who are taught; that its results must be to interpret this experience or, in the words of Pestalozzi, to "make the people intelligent about the life they live." Thus, what is close to life and in continued use becomes most valuable as educational material. He quoted Bernard Shaw as saying that "women are interested primarily in life while men are interested in the activities and trappings of life."

Women are interested in the right use of things produced, while men are interested in producing. He held that women exercising their function of choice would yet dictate how houses for homes would be built and what should be the output in food and clothing, and this being the case the best knowledge regarding all these subjects should be put into their hands.

Dr. Claxton recommended that attention be turned to making the subject content of Home Economics courses more definite and that ways be devised for introducing these courses not only into the 14,000 high schools of the country but into the 300,000 schools below the high schools, since the welfare of our people depends, for some part of their lives, primarily on the way a home is run; and the time will never come when we shall not need to know more about how to make the home a fit place for children to grow to manhood and womanhood.

In conclusion Dr. Claxton spoke of the recent increase in the government appropriation for the work of the Bureau of Education and said that it was his purpose to employ one or more specialists in the teaching of Home Economics in order to make the Bureau as nearly as possible a clearing house for information, advice, and mature opinion on this important branch of education.

THE LAUNDRY: EQUIPMENT, PLANS, AND FORMULAS¹

MISS L. RAY BALDERSTON

Teachers College, Columbia University

Report of the Laundry Committee. The chairman of the Laundry Committee was appointed in November. She asked five other members to act on the committee. The subject was divided into five sections—educational, institutional, commercial, municipal and coöperative.

The plan was to ask those who were working in these fields to investigate and bring in reports that might be linked together. These reports it was hoped would show the relation and interrelation of those who were specializing and were, perhaps, anxious to know of the other fields or who did not have time to learn all the other viewpoints. For example, one person answered, when asked to send in any material she

¹ Presented at the Fifth Annual Meeting of the Institution Economics Section of the American Home Economics Association, Lake Placid, N. Y., June, 1914.

might have that would be of help to the conference, "We have nothing to send because we are just doing laundry work in connection with our dormitory." Another answered, "I am not sending any formulas as they are no different from others, but I shall be glad to see what has been sent in when they are published. May I have a copy?" This letter was answered and in reply some very valuable formulas came.

The chairman had cordial response from all, but all except one declined to work as leaders for the five groups. The time was fast passing, and so the report had to be made up by the chairman from the letters sent in, and the special work of the students of Institutional Laundry at Teachers College. This latter is presented in our exhibit with the idea that it means more to see it than to hear it read.

From the educational side, fifty letters were sent to colleges, agricultural and industrial schools. These letters asked to have outlines of courses of laundry work for either domestic or institutional training sent in. A second question inquired where this work is given in the curriculum. The following are giving courses in laundry work: University of Washington; State College of Washington; Lewis Institute, Chicago; College of Hawaii (optional); Agricultural College, Iowa; University of Maine, Orono; Temple College, Philadelphia; Agricultural College, Alfred, N. Y.; Pratt Institute, Brooklyn; Drexel Institute, Philadelphia, Teachers College, New York; and Battle Creek Sanatorium.

In most cases the work is in connection with the textile course. Only one answer (Battle Creek) came that they had institutional work. Many are giving a little training to their students, more are asking about equipment and teaching outlines. Miss Raitt who was asked to lead a section on the educational work of the laundry sends this report:

I wrote to the Universities, colleges and normal schools in Washington, Idaho, Montana and Oregon and find it encouraging to see how many small schools realize the loss they suffer in not having the course. In Idaho they train laundry managers for coöperative laundries in connection with the farmers coöperative creameries in their short course.

Miss Raitt's question for discussion is the relation between the course in textiles and laundering. She says: "We have included dyeing with laundry work but find it hard not to overlap with the textile work."

From the field comes most often the request for equipment. From the demands for trained women sent to Teachers College it is a positive need for us to have women trained in laundry from its broad viewpoint—chemistry, textiles, laundry methods and machinery and plans as well as devices.

A letter just received reads: "We want a woman trained to do her work as a profession rather than as a job." Another writes: "Will you help us furnish our laundry and when we are ready we will call on you for a trained woman to run it and teach laundry." A club wants a trained woman—hospitals are always asking, and so far the answer is: "No one to send."

This work requires as much special training as any other if the work is to be scientific and economical. The short course given in a textile or domestic course is not enough to make a woman capable and ready for the big problem.

There is, perhaps, no field so devoid of valuable reference books; no work which has gone by such a hit-and-miss method as ours; and no field where so much scientific research and friendly exchange should exist.

The institutional problem is a definite one needing coöperation, unifying, and standardizing.

The matter of waste can never be met until the formulas are standardized. This standardization will come only through exchange of the best, the working out of formulas, and then no longer considering these formulas as stock in trade to the worker, but as a matter of educational and institutional value and necessity.

The problems of machinery are best met by the commercial man who is always doing the most work with least cost and least expenditure of time. It behooves the institutional worker to follow the commercial worker with efficiency in mind. Could there not be the individual working out of problems during the year, and then as a free will offering could they not be sent in as early as March to your laundry chairman?

Some problems sent in for discussion are those we have heard before but they remain unsolved—such problems as the following:

What is the relative wear and tear of machine vs. handwork? Is twenty-five times a good number of washings for a shirt waist before it breaks? The expense problem—bags and boxes vs. paper and string. Sorting and marking. Standards of marking. Is it economy to do blankets in the institutions? How much bleach is required? Is it always required?

The commercial viewpoint is with us and still not of us. It is from it we are to learn. Some suggestions from the commercial side may be passed on to us:

The use of aniline blue in all institutional laundries is recommended, realizing that balls and block blues are wasteful in themselves and in the carelessness and ignorance of the worker.

The use of neutral soap as the best economy and with it a high grade soda; and the accepted fact that it is not economy, at least to most institutions, to make their own soap.

The more extensive use of body ironer for aprons, skirts and underwear in general.

That the heated tumbler is a substantial help and one here to stay.

That bleach may be eliminated through the use of cold water, together with soap, for the soak and for the wash water. Bellevue Hospital proves this when we find in their report that with the thousands and thousands of pieces daily, scarcely a gallon of bleach a month is used.

A type of commercial laundry work which means much today because of its two-fold interest is the so-called charity laundry or settlement laundry. It is commercial in that it is self-supporting, and is municipal in that it is a benefit to the many women who are insufficiently trained for the work. These laundries can be a success to the patron, to the worker and to the institution, but there is no place where the trained head can be and is of such great need. The risk of wear and tear, the economy, and more than all the fact that these places are training schools for women who may later take up this work as a trade or a profession, is reason enough why the trained worker should be created and placed over such a venture.

Another type of commercial worker appearing on the horizon is the head of a community laundry—we may call it coöperative. A few weeks ago a woman of means representing 25 families—all wealthy—wanted a person who would help plan the making over, into a laundry, of a large house on the master's estate. The plan was for these 25 families to ship their laundry, four hours' journey, to this community laundry with the full assurance that work would be perfectly done. This work requires a trained woman.

A special field opening as the interest increases is a so-called laundry architect or efficiency woman. This person must be versed in machinery, its construction, relative value, initial cost, operative cost and the general arrangement of plant from working view point. Three calls

in two weeks for that work, to say nothing of the correspondence, show this need of a trained woman.

From the municipal view point, we hunt earnestly for cities where the poor have been considered as to health and decency. Compared with foreign countries our country, which is said to have the largest soap bill, and it is said the cleanliness of a nation is known by its soap bill, has made the least headway in this great matter of public health. Dr. Donald B. Armstrong says: "Public health is purchasable, so, indeed is public cleanliness." Many communities provide the means for the cleansing of human bodies. "It is just as essential," says Dr. Armstrong, "to health and decency that public facilities where private ones are lacking, should be provided for cleansing of the garment, the condition of which must, otherwise lower the tone of decency of the people of the community." We are all teaching bacteriology, biology, public health, sanitation, but at our door we allow 30 to 45 per cent of the families in large cities to be without washing facilities in their homes and even a much greater percentage are without hot water unless heated on the kitchen stove.

No more need be said as to the reason for these places. To some extent the wet wash has met the need, but then comes the drying stage and its steam and the inconvenience of wet clothes in the living quarters, to say nothing of the odor, the dampness for the family who many times must eat, sleep, and work in the same quarters.

There are 15 public wash houses in all America against 35 in London alone, and 16 in Glasgow. The public wash houses can be combined with the public bath houses. There are two kinds of public laundries to be considered—the wash house and the laundry. The cost of the wash house is small because equipment is simple and inexpensive. Set tubs are placed—two to a stall—and here the woman may take her clothes, wash them in the privacy of the compartment allotted her and may dry them in a drier.

The public laundry is a machine laundry where the washing machines have 4-5 sections for as many different washes at a time. A man is hired to superintend and run the machines, together with the extractor and drier. A bag or locker is allowed each owner, who may leave a wash and call for it sweet and clean later in the day. The cost for this being about 20 cents. The woman has done none of the work.

A letter from Dr. Armstrong, June 12, brings the splendid news from New York City that two laundries are at last to be established by October 1 for the poor, one to be a wash house and one a laundry.

This letter also invites the coöperation of the students in laundry work at Teachers College, and was received with rejoicing.

Every worker in sanitation, economic or efficiency problems should give individual consideration to the municipal or public wash houses in her city, and in the rural districts to the coöperative laundries. Many of our rural teachers are teaching better home methods, excellent in themselves, but for the woman already overworked, let the teacher urge the creamery machinery doing double duty, churning butter in one side or end of the building, and washing clothes in the other.

Our fifth section, coöperative laundries, has not been discussed, as no special growth has been reported this year, except Miss Effie Raitt reports that in Idaho they are training teachers for coöperative laundries in their creamery short courses.

What is the very gist of the committee's report?

First, much keener interest is evident today than ever before that the laundry in the home, in the institution, and in the community be no longer work with a hit-and-miss method, but with scientific reasons for everything.

Second, that laundering of soiled clothes is not a job but must be a profession, where knowledge of textiles, chemistry, and mechanics is not only recognized but used.

Third, that a trained worker must be demanded to conduct this work and this worker must no longer be considered the laundress but, as an official, a recognized member whose work is just as essential to the welfare of humanity as that of a dietitian or general housekeeper.

Fourth, That training schools must consider this matter as a positive, definite demand for education, and that school boards incorporate it into their school curriculum. The younger children should have it as a home training problem with the view to better sanitation; the women in household arts training must have a fuller course that they may be able to supervise in the school and in the home, and tend towards better economy; the training schools must take it up to prepare women for the work which is more and more to be sent out of the home, or, if in an institution, must be cared for as a sanitation and economic problem.

Fifth, there must be coöperation among the commercial, institution, and teacher worker.

Subjects for discussion and for reports for next year's work of the Committee

1. Determining effect of laundry wear—bleach vs. none.
2. Disinfection of clothes in the laundry.

3. Handling laundry work in general. Household science course. Amount of practical work.
4. Method by which dormitory originally planned to house and feed 30 or 40 people can be changed to an institution for several hundred. Question: What apparatus and changes in organization?
5. Coöperative laundries, organization of same.
6. Can laundry be done without sunshine and bleach?
7. How much bleach required for washing clean a wash for 150 women and 12 men?
8. Is 25 times a good number of washings for a waist without breaking?
9. Prices—maximum and minimum for flat work.
10. The question of buttoning the ironed garment and its annoyance.
11. Comparative expense in paper vs. box packages for delivery of laundried goods.
12. Training required for women.
13. Prices paid to heads of laundries.
14. Position of head of laundry.
15. Relation of laundry course with textiles.
16. Shall dyeing be taught with the textiles.

Felling of mangles

1. Requirements:

Material coarsely woven; of good absorbent quality; evaporates moisture rapidly; sufficiently elastic to withstand great heat; stays soft; prevents the breaking of buttons.
2. Kinds—classified according to above requirements:

Woven wool felt; "Atlas" white felt; Brown laundry hair felt; "Atlas" knitted padding.
3. Relative values—width and cost:

a. Woven wool felt: 42 inch wide—2½ lbs. to running yard; \$1.00 per lb.—20 yd. bolt; \$1.25 per lb.—less than bolt.	
b. "Atlas" white felt: 9 widths from 26 inches—120 inches; 55 cents per lb. in 50 yd. bolts; 60c per lb. in shorter lengths.	
c. Brown laundry hair felt: ¼ inch thick per sq. ft. 6¼ cents; ½ inch thick per sq. ft. 7 cents; ¾ inch thick per sq. ft. 10 cents; 1 inch thick per sq. foot 13 cents. One cent per sq. ft. additional for cutting.	
d. "Atlas" knitted padding:	
50 yds.	less than 50 yds.
⅝ inch thick, 51 inches wide, per yd. \$1.05	\$1.25
⅝ inch thick, 74 inches wide, per yd. 1.60	1.85
⅝ inch thick, 90 inches wide, per yd. 1.90	2.25

Outside covering of mangles

1. Requirements:
 - a. Material of smooth equal surface to prevent marking of article mangled.
 - b. Material with very little sizing to prevent burning when in contact with ironing surface.
2. Kinds—Classified according to above requirements:

Unbleached muslin; duck; enamel cloth; Atlas cloth.

3. Relative values width and cost:

a. Unbleached muslin: 6 widths from 36 inches to 108 inches, 9 to 36½ cents per yd. in 50-yd. bolts.

b. Duck:

Width in inches	Price per yard		
	No. 8	No. 10	No. 12
50	\$0.69	\$0.58	\$0.48
72	1.04	0.87	0.72
90	1.35	1.12	0.94
104	1.60	1.33	1.10

c. Enamel Cloth: 46 inches wide, per yd. 29 cents; 56 inches wide, per yd. 30 cents; 72 inches wide, per yd. 33 cents.

BUYING LUNCH ROOM SUPPLIES¹

EDNA M. KLAER

Supervisor, Elementary School Lunches, New York City

The buying of lunch room supplies differs very much according to the type of school, or type of lunch room, and the quality of food served. In a small lunch room or in a large one without storing facilities it is necessary to buy in retail quantities. During the summer the New York schools are closed, except two, one cripple school and one truant school. Rather than have food delivered for these in large quantities from the food supply store we decided to buy in the corner grocery near there, getting the best prices possible. For example, we tried to get cocoa in bulk or large amounts, but they had nothing except half pound cans, at 20 cents. We had been paying 14 cents a pound for bulk cocoa and getting the best quality. After the same experience with many other supplies we decided it was cheaper to have the food delivered from the food supply store and pay for the distribution. That will be the experience very often in the small schools, or the small lunch rooms with no storage space.

In the larger lunch rooms with storage space it is more economical to buy in large quantities. The car lot is of course the best, but this is almost always impossible for there are very few institutions that are able to handle that quantity of food without there being enough waste to overcome the profit. By going directly to the wholesale grocer and buying in the original packages, such things as macaroni, prunes, dried apples, etc., in 50-pound lots, good value may be obtained.

¹ Presented at the Fifth Annual Meeting of the Institution Economics Section of the American Home Economics Association, Lake Placid, N. Y., June, 1914.

Deliveries are made daily but very often you have to pay for the delivery. In New York we have five central kitchens which are supplying food for 17 schools. Some of our food, when we want small quantities, comes from the food supply store; otherwise it comes from the wholesale grocery direct, and by that method we have saved about 25 per cent on the original cost.

In dealing with salesmen, the difficulty is to get the same quality in delivered goods as was shown in samples. It is necessary, especially after two or three deliveries, to check up the food directly with the samples in order to hold the salesman up to the standard which he has set himself. This has been found to be much more difficult than detecting errors in prices, and it is a task that cannot be turned over to untrained assistants. Another matter that must be checked is the weight. This we have arranged for by providing scales in our five central kitchens where everything is to be weighed and checked up. The law should protect from scant weights but it is not often enforced.

In buying we have to consider first the psychology of selling food. If food is not attractive it is very hard to persuade people to buy it. The attractiveness depends partly upon the preparation, especially in crackers, prepared and dried fruits, etc. For example, very small prunes, even if cooked well, are not as attractive as large ones. It is a question whether it is economy to buy the smaller prunes at a cheaper price, not only on account of the appearance, but also on account of the proportion of pit to pulp. At present we are experimenting with different grades of prunes to see whether we really do save money by buying the smaller ones. We have very little standardization of foods in any state, at least it is not very apparent and this is especially true in regard to canned goods. Canned goods should be bought in case lots, the samples should be opened, and the proportion of liquid to solid food measured so that we may see, in buying a more expensive brand whether we are really getting a cheaper or a more expensive article. If we are paying for a large amount of water we are certainly in the end not getting as much value as if we bought a more expensive brand and added the water ourselves. This is to be considered in buying tomatoes, corn, and almost all of the canned vegetables and fruits. Another point in buying canned goods is to notice the flavor very carefully. That differs very much according to the quality of food used and the method of preparation. We have watched these points in buying the dried fruits and vegetables that constitute the greater part of the food used in the New York schools.

Another question arises as to the use of the sulphur bleached foods. We have not been able to prove, as definitely as we should like, whether or not the sulphur bleached fruits are injurious, but in Germany it is acknowledged that they are. It would at least seem best to avoid the sulphur bleached fruits and vegetables. In the question of flour some consider it a better plan to buy two or three grades of flour and mix them; this plan would, no doubt, be advisable in institutions or lunch rooms where a large quantity, is bought. One brand of flour may have a high percentage of gluten and, by mixing two or three brands, a result may be obtained similar to that where the milk from a number of cows is mixed in order to approximate a standard article.

The use of bleached flour in macaroni was brought to our attention recently when we found that we were buying bleached macaroni without knowing it. It may also be dyed to hide adulteration. With sugar there is very little danger of adulteration, for that is very well standardized, and by buying a good quality of sugar we have no difficulty. The milk differs. It is a good plan to have the milk examined; find out the bacterial count, percentage of fat, etc., and have some standard which the milk should meet. We have been helped very much in our work this year by being able to coöperate with the Russell Sage Pathological Department which, through the Cornell Laboratories, is testing almost all of our foods. Not only did we find bleached macaroni but upon examination we found that jam contained tartaric acid and benzoate of soda. With this discovery we began to test all the foods that we could. In some cases we changed the place of purchase; in others we found that we were already buying food of good quality. We are almost always able to visit the plant from which the food is sent. That gives us an opportunity to examine the sanitary condition of the plant, and to get some idea of how the work is done. It also gives us a chance to get some definite idea of the condition of the workers, and that should give us a chance to take a stand for the advance of social conditions in this work. We should be particular to buy from firms who are paying living wages, furnishing good working conditions for their girls or men, and obeying the pure food laws. If there were a greater demand, on the part of the buyer, for the fulfillment of the laws they would be carried out much better; and that is one of the directions that the social movement is taking today.

It has been possible to get from certain biscuit and chocolate factories the caloric value of the food they are selling. They have furnished that data largely on request. If they have not had it, and they usually have

not, they have been willing to get it; and they are becoming more and more impressed with the principle of standardizing their goods. That is what we want them to do because in that way we are making the subject of lunch rooms a scientific question. There must be business but there must also be the educational side which must be promoted by helping to educate the manufacturers first.

The care of food in the schools has had much attention. In our central kitchens we have required a daily accounting for the quantity of food used for the different places. We know the number of children fed; we know the amount of food which should be used, and by having that daily account we are able to know how much of that food is actually used, and how much is wasted. We have found that there has been noticeable difference since the amounts were noted daily. The workers have become more accurate, and that alone is quite worth while, even though little is saved. We have a kind of inventory which gives us the opportunity of checking up the accuracy of the report which also gives us a chance to finish up the accounts for the month, taking into account all the food which is left in the kitchen and knowing the actual running expenses and cost of food for that month.

We have tried to emphasize the educational side in the New York school lunches. The students help to distribute the food, and we are trying to be very particular that they are as clean as school boys and girls can be, and that the food is handled only when they wear white aprons and gloves. We are not able to control the choice of the food to any great extent, but a supervisor who is interested can very often change by suggestion the choice of food that the child is making. We have the hot soup which the child must buy first. He can have nothing from the penny table until he has bought that and it is interesting to see how many children, if sent back for bread, will go back without protest. On that account we try to train the children who are serving the bread to insist upon the others taking it. Very often the teacher will station herself at the bread basket and refuse to let anyone go by who does not have bread. It is probable that at least four-fifths of the New York children take bread with their soup, partly because of what we are trying to do, and partly because they like to break the bread into the soup.

In certain sections it has been very hard to introduce food which we consider healthful. For example, very many children do not like prunes, but by getting one or two to try these and other foods we have

educated a great many children to eat foods which are good for them, and which without that effort would not have been touched. The same thing is true of some of our vegetables, and in certain schools, with some children, it is true of milk. We have, besides our 17 hot school lunches a milk service in 8 schools at ten o'clock. At the close of the year there were only 2 or 3 of the children out of 10 kindergartens and first grades who were not taking milk every day. Then there is the question of the regularity of a hot noon meal which will be carried over to a certain extent into the summer. Having had hot lunch at noon for nine months out of the year the child is very likely to go home and ask for a hot lunch. There is a possibility in that way of educating the child and the parents.

Another way of educating the parents is through our mothers' meetings and exhibits. We have had exhibits in six schools this year, and mothers' meetings in eight, and it is interesting to see the number of mothers who have returned to the school and asked how certain foods are prepared. Very many have visited the lunch rooms after the meeting. The attendance at the lunch has increased after we have had a mothers' meeting, and all those results show us that there is some value in the educational work; that while we are busy actually serving lunches, it is also important to pay some attention to this other side which in the end will bear much fruit.

FOOD AND THE LAW: THE NEED OF UNIFORM FOOD LAWS

HELEN LOUISE JOHNSON

No one can deny the beneficence of the object of the body of food laws and regulations. The federal food and drug law has a two-fold purpose in the preservation of the health of a people, and the protection of their pocket-books against deception and fraud. Yet there are circumstances, for which the consumers are in part responsible, that have compelled an additional increase in the burden of the cost of living as a result of food legislation.

We all know that cleanliness costs. We ought to know that inspection of place and employees, sanitation, purity and soundness of material, carefulness in all details, all cost as well, and we should be ready to pay for these things if we demand them. What we forget to count in the cost is the expense of enforcing a statute after it is written into our

laws. And when, in place of one regulation, or standard, several are established to which producers must conform if they are to sell their goods throughout the country, then the cost rises to the point of rousing vociferous protest, often from the very ones who have been foremost in agitating for a supposed reform.

In 1912 a well-known lawyer, James Westervelt by name, published a much needed compilation of the American food and drug laws. This comprised both the statutes of the United States and of the several states regarding the manufacture, sale and distribution of foods and drugs. These were given in as condensed a form as possible, with the administrative rules and regulations of the federal and state departments. Only the editorial comment required to explain discrepancies and make involved points clear was added, yet the material makes a closely printed book of 1535 pages, nine by six inches in size.

In other words, the comparatively brief but comprehensive federal pure food and drug law passed in 1906, which applies to articles entering into interstate commerce and its products sold in the District of Columbia and territories of the United States, has, in the different states for their own use, been added to, and interpreted differently; various standards of so-called purity have been established, and differences in labelling, marking, etc., framed, until, in place of a uniform law which might be vigorously enforced throughout the country, we have a burden of laws varying almost from state to state. To the casual observer it would seem that the forty-seven different varieties of food regulations had been largely planned for the benefit of the lawyers, who might be reduced either in number or income were it not that our Constitution permits such latitude in state autonomy. It has now become necessary for every large manufacturer to have in his employ one lawyer or a firm of lawyers, not to help him evade, but to enable him to keep the law. For this of course the consumer pays, as it is one of the "overhead charges" of manufacture.

This lack of uniformity in standards and regulations costs in several different ways. It costs the manufacturer unnecessarily to prepare a certain article under three or four different labels, and to keep and distribute the goods so that a package labelled with letters of certain type may not be sold in the state which requires another size or kind. It costs the manufacturer in both reputation and money when, by the carelessness of some clerk, or packer, or the jobber to whom the goods have been assigned, packages prepared according to the laws of one state are sent to and sold in another, and he is fined for illegal procedure.

The article may be of exactly the same grade and wholesomeness in each case, but it does not comply with the law of the particular state into which it was sent by mistake, while it does comply with the law of the one in which it was manufactured or for which it was intended. Of course this is absurd, but these absurdities exist all over the states, unduly adding to our cost of living, and to the complexities of production and distribution.

To a very considerable extent the consuming public knows little about the food laws of their own, or any other state. They are wholly unaware that "purity" is not an absolute term, absolute chemical and bacteriological purity, if it were possible, being in such cases a very different thing from "purity" under the law; and that the "purity" of any article in its trade relations depends upon the definition or standard established by the law of that particular state, and this may or may not conform to the federal standard, or that of neighboring states. They do not know that the federal statute, known as the food and drugs act of June 30, 1906, has to do only with foods and drugs (a) in inter-state commerce; (b) imported or offered for import; (c) exported or offered for export; and (d) to their manufacture and sale in the District of Columbia or any of the territories.

This distinctly means that whether it be meat, milk, vegetables, candy or other food products, any single state can slaughter diseased animals, produce dirty, unsafe milk, misbrand cans, poison candy and sell all these within its own borders so long as that state permits; and the national government cannot interfere because its pure food and drug law, as stated above, applies to articles of interstate commerce. It can and does interfere with, arrest and fine the producer, prohibit the goods, and better still lead and educate him into safer, cleaner, and more honest ways when the goods cross the border line into another state.

The lack of knowledge as to the scope and the limitations of the federal pure food and drug law have led to gross misunderstanding, and much unjustified criticism and suspicion of the federal government by those who have not taken the time, or the pains, to gain a complete understanding of the situation. In some cases open comment has been made quite at variance with the actual facts. Sometimes pure gossip is indulged in, and "gossip," we know, is idle talk, usually lacking any basis of fact.

Then lack of uniformity in the pure food and drug laws in the different states costs in safety for some at the expense of risk for many.

Suppose in a certain city there is a good sanitary law regarding the milk supply, which is rigidly enforced. The milk comes from sound animals, inspected dairies, and is required to be shipped and cared for in sanitary ways. This means a satisfactory and probably safe milk supply for that place. But all about are dairies which are not permitted to ship or sell their milk to that city. These laws obtain in this one city but not in the neighboring towns nor the whole state. Where does milk go which is excluded from sale in this city? The other towns and places nearby, not so protected, naturally become the market for this poor and possibly unsafe supply. This is always, and will be always the case until for the national government and for every state uniform state and municipal laws are enacted and enforced; and the federal government can do no more about it than it now does, any more than you can control the private family life of your neighbor across the way.

Perhaps no other one thing has been more grossly misunderstood and misinterpreted than the limitations of the federal meat inspection. There is a strong and rigidly enforced national law compelling sanitary conditions in the slaughter and packing houses; a careful inspection before and after slaughter, and a clean and careful handling of the meat. But this only applies to the federally inspected establishments, where the product enters into inter-state commerce, and practically few states or cities have any corresponding state or municipal regulations. The result here is similar to what we have seen in the case of milk. The men who have animals which they know will not pass inspection can, and, as a matter of fact, do sell them to the uninspected establishments, and the local supply of meat in small cities and towns is not up to the grade of the larger place where the inspected product is sold. Probably no other parts of the country suffer more from unsafe food than the little towns which are forced to depend upon a local supply, and are wholly unprotected by inspection, and without the facilities for procuring a better supply of meat and milk.

The lack of uniformity which adds unduly to the cost of food, however, is the unnecessary variations in state laws—particularly in regard to the label or the branding of goods. To take an instance of another sort which shows the confusion under present conditions: In Massachusetts, baking powder must have securely affixed to the outside of every box, can or package containing baking powder or like mixture or compound, a label distinctly printed in brier Gothic capital letters,

in the English language, containing the name and residence of the manufacturer and the ingredients of the baking powder.

Illinois requires that the label on any package of food shall be printed plainly and legibly in English, and the size of the type, if not otherwise described, shall not be smaller than eight point (brevier) caps, provided that in case the size of the package will not permit the use of eight point cap type, the size of the type may be reduced. In the case of baking powders the common names of all ingredients must be printed on the label.

Kansas asks that the percentages of ingredients should be stated in conspicuous letters on the label, and in Kentucky every can and package of baking powder must be labeled so as to show clearly the name of the acid salt employed, this statement plainly made on the face of the label.

In Wisconsin the can or package of baking powder must have securely fixed in a conspicuous place on the side of the package, separate from other reading matter, a light colored label printed in black ink in type not smaller than eight point bold-faced caps, stating the name and address of the manufacturer and the words "This baking powder is composed of the following ingredients and none other," immediately followed by the common name of each ingredient.

The Mississippi statute requires that the leavening power of gas shall not at any time be less than 8 per cent, which is a law certainly extremely difficult, if not almost incapable, of enforcement, and so is worse than no attempt at a standard.

The Louisiana law reads,

Baking powder must bear a label printed with black ink, Roman letters not less than eight point caps on a light background, showing manufacturer's name, place of manufacture, and the name of the acid ingredients together with a list of all the ingredients. Baking powders must yield at least 8 per cent available carbon dioxide and the use of argolite, terra alba and all other mineral fillers, and any substance deemed poisonous or injurious is prohibited.

And this is not all the variation of demand.

It should be evident why a firm manufacturing different food products finds it expensive to have cans and packages properly marked for the requirements in each state. If they attempted to put all the requirements on one label, it would require a can or box of such large size that it would be of necessity quite out of proportion to its contents. It follows therefore, there must be someone employed who

knows the legal requirements of the different states and keeps track of them, for the public which can induce the passage of the bills not infrequently changes its mind at each legislative session.

There is no apparent good reason for this variation in label. It only makes confusion and expense, as to the varying food standards. Standards are facts, not laws. They are the facts upon which the law operates, for before a food can be proved to be adulterated or sophisticated, its deviation from an established standard must be shown.

The difficulties in this should be plain to every housekeeper. Whose bread, pastry, preserves, jams, jellies or pickles shall be taken as the standard? Yours or Mrs. Smith's? There has been as great a difference in defining standards of products in the different states as there would be in any community if it were left for the decision of forty-eight housekeepers.

When the standards for purity for food products were proclaimed by the Secretary of Agriculture in June, 1906, the principles upon which they were based were given. The standards were expressed in the form of definitions so framed as to exclude substances not included in the definitions. The definitions included, where possible, those qualities which make the articles described wholesome for food.

This has necessitated definitions of food products such for instance as meat, sausage, milk, cream, butter, ice-cream, grains, flour, rice, pickles, vinegar, catsup, candy and many, many other things.

Do you know what ice-cream is? Can you define mince-meat? What is your idea of a standard sausage? And what do you know about condensed milk? Yet you are the buyer of these foods, and no doubt you know whether the above mentioned articles, judged by the standard you commonly apply—appearance, taste, odor, freedom from visible dirt, etc.—are good or not when you purchase or make them.

The Department of Agriculture says that ice-cream is a frozen product made from cream and sugar, with or without a natural flavoring, and containing not less than 14 per cent of milk fat. This then is a standard, a deviation from which means adulteration. Because the law is interpreted so as to exclude all substances not mentioned, the federal statute permits only, cream, sugar and a natural flavoring.

You make ice-cream which your family may like, and for which recipes have appeared in cook books for two or three generations, with milk, corn-starch and 5 per cent of milk fat or cream, but you are

serving food to your family and friends which would be adulterated, according to the federal law, if sold under conditions where this law applies. You are within the law in some states for there are many standards for ice-cream under existing laws.

In Indiana, under the state law, you may use 8 per cent of milk fat, provided you have 18 per cent of milk solids, sweeten the cream with glucose, and thicken it with gelatin not to exceed the amount of seven-tenths of 1 per cent. If you wish to have your home-made products, made for your own use conform to the requirements of the law as you are rightly demanding of the producer, it is to be hoped that you are good at percentages and fully understand just how much milk and cream and of what quality you must use, in order to come within the established standard.

In Iowa 1 per cent, by weight, of harmless thickener may be added to ice-cream, and so in this state the time honored corn-starch is permissible. But the acidity must not exceed 0.3 per cent, and the ice-cream must contain 12 per cent, by weight, of milk fat. New Hampshire permits not over 1 per cent of "filler," and requires 14 per cent of milk fat. The statute also reads that "no substance other than milk, cream, eggs, sugar and some natural flavoring can be used." Here one can make Neapolitan as well as Philadelphia ice-cream, and it is evidently of a stricter standard than Pennsylvania which requires but 8 per cent of milk fat, and permits one half of 1 per cent of pure gelatine, gum tragacanth, or other vegetable gum.

Mississippi permits not over three ounces of gelatine to a gallon of cream, while Maryland states that

ice-cream is a frozen product made from cream and other milk substances and sugar, with or without natural flavoring, and containing not less than 4 per cent of milk fat, to which may be added fresh eggs, and not exceeding 1 per cent of pure gelatine, gum tragacanth or vegetable gum, without statement of such fact, and such goods may be called ice-cream provided the required percentage of fat is maintained.

And Maryland has been noted for its cooks and its foods!

Remember that these are all standards, or definitions, made in these separate states, and legal throughout that special state, but illegal in another requiring a different standard; and that not one of them is in conformity with the federal statute, nor would the products be permissible in inter-state commerce. Ice-cream is shipped from state to state to a considerable degree. Under date of August 16, the Department of Agriculture gives notice of the fining of two shippers of ice-cream, one

in West Virginia and another in Ohio, for adulteration, and the government could not have seized the goods if they had not crossed the border to another state.

All these variations have made so much trouble for the producer and added so enormously to the cost for all concerned, that there is now a somewhat general movement toward securing a greater uniformity in regulation. The Committee on the Purity of Commercial Products appointed from the Governor's Commission on Uniform Laws, are holding hearings, sifting evidence, gathering facts and compiling data on the discrepancies between state laws and their result, which will be presented in due time. The National Food Trades Conference formed for the purpose of gathering and crystallizing the opinions of the food trade have met with and urged upon the Department of Agriculture the need for more uniform food laws, offering their coöperation along the lines the government may suggest. A third committee for this same purpose representing the entire food and drug industry of the nation has been created by the Chamber of Commerce of the United States.

In all this it seems fair to say there is evidenced no desire to weaken or annul any beneficent or proper legislation. On the contrary there is a definite expression of a wish to unify and strengthen existing laws and make their enforcement more possible. It may be necessary for some one state to sacrifice a less essential point (a question of technical detail, for instance) for the sake of the whole. It may be that such a step will seem to some a backward one but it is not necessarily so. Nevertheless it ought to be plain to anyone who can and will endeavor to ascertain how many kinds of things are lawful in one state and not in another, that the greatest progress will be made when the states mean what they say when they quote, "united we stand, divided we fall."

Because the women of the country are the buyers of the household supplies; because upon their shoulders there continues to be placed more and more responsibility as to the larger civic housekeeping; because they are the natural conservators and fundamentally concerned in the preservation of the health and wealth of the family, it has become necessary for them to know many things they have left to the men heretofore. Laws are one of these things, particularly those laws which relate to the safeguarding of the food supply.

The scope of the law and the method of enforcing it are the definite points upon which the teachers of Home Economics, and the housekeepers of any community should be fully informed.

Such questions as the following should be answered before criticism is indulged in, or any campaigns of agitation undertaken.

First, what is your state law regarding these foods?

Second, is it in conformity with or does it differ from the federal statute, or from the statutes of neighboring states?

Third, are the municipal regulations in your city or town at variance or in conformity with state laws, and how does this affect the food supply of your particular town or city?

Fourth, are the laws enforced?

Fifth, is there money enough appropriated to enforce them? Are a sufficient number of inspectors employed to make proper inspection possible? How and by whom are these inspectors appointed? Who is responsible for their work?

Those who should be in a position to know, and whose opinion is worthy of credence, state that the food laws are being complied with very generally throughout the country, and where failure occurs that it more frequently arises from ignorance, than from willfulness or a desire to evade, or deceive. This is not always true, but it is sufficiently so to induce sane, intelligent people to refuse to be misled by the claims of the food agitator, who usually has some reason, aside from the good of the community, for attack on any special article.

HOUSEHOLD PROGRESS OF ONE HUNDRED YEARS

PROGRAM FOR HOME ECONOMICS DAY, 1914-1915

BENJAMIN R. ANDREWS

Nineteen hundred fourteen, the one-hundredth anniversary of the death of Benjamin Thompson, Count Rumford, 1753-1814, the first modern scientist to study the problems of the household, makes appropriate a review of progress from the Colonial household of Rumford's time to the modern household. Rumford's own contribution to progress was, first, the application of the method of scientific study to household problems which has issued today in Home Economics education, and second, a study of particular household problems, as the application of heat to food materials, the improvement of ranges and utensils for baking, broiling, and roasting, the principles of nutrition and economy of food, methods of heating, lighting and ventilating dwellings, the hygiene and aesthetics of clothing, and the organization

and administration of public institutions, such as school lunches and institutions for the poor.

Progress in the household, beginning with Rumford, and promoted by Catherine Beecher, Edward L. Youmans, W. O. Atwater, Ellen H. Richards, and present day scientific workers, may be represented by a suitable program in schools, colleges, and clubs, upon December 3, 1914, the birthday of Ellen Richards or upon some other convenient occasion later in the year to be chosen and designated as "Home Economics Day." In such a program some of the following suggestions may be followed:

A. Founders of Home Economics. A single talk or a series by different persons; life sketches of Xenophon, Rumford, Catherine E. Beecher, and Ellen H. Richards may be had, suitable for a program (ten cents for four), and a special biographical sketch of Count Rumford (five cents); address, American Home Economics Association, Roland Park, Baltimore, Md. The Association will also furnish portraits of Rumford, Catherine Beecher, and Ellen Richards, suitable for wall decoration and framing, at ten cents each, and the "Life of Ellen H. Richards" by C. L. Hunt at \$1.62 post paid.

B. Progress of the Household, illustrated by tableaux, with or without dialogues, costumes, simple scenery, etc., or by essay, referring to changes in various fields since Rumford's time. Of the following suggested topics, the first only is outlined in detail, but treatment of other topics can readily be devised.

(1) "The Household Budget of the Colonial Home and the Modern Home." Let four girls present the Colonial Budget. Enter No. 1, dressed in Martha Washington costume, and bearing a placard or legend, "The Budget of the Colonial Household;" she beckons in after her the three others, successively, dressed in calico and each one as she enters reads to the audience the legend she carries; No. 2, with a legend, "The Colonial House," and carrying a picture of a log cabin, or a model on a tray, with the legend, "The Forest gave Logs for Our Houses—No Rent Bills;" No. 3—"Food of the Colonial Home," with a tray containing bacon or salt pork, corn meal, potatoes, bread, and the legend, "The Homestead Produced the Food—No Food Bills;" No. 4.—Colonial Clothing," with a picture of a spinning wheel or loom or both, models, or possibly samples of homespun cloth, or skins for clothing, with legend, "Clothing from Nature's Materials—No Dressmakers' Bills." The four representing "Colonial Budget" now take a position at one side of the platform and watch the "Modern Budget" group come on.

For the Modern Budget—six girls: No. 1, as leader with legend, "Modern Family Budget of Ellen Richards," introducing the others—No. 2, "Shelter" with a picture of a modern house or a toy house on tray, with legend, "For rent—20 per cent of family income;" No. 3, girl with sign "Food," with a tray with modern package foods, with legend, "For food—25 per cent of family income;" No. 4, "Clothing," leading in a dressform on wheels, with a dress upon it and the picture of a head and hat added, with a legend, "For clothing—15 per cent of family income;" No. 5, "Operating Expenses," dressed as a houseworker with apron and cap, and fastened to her apron, dish-mop, egg-beater, baking dish, etc. to indicate different kinds of housework, and bearing a legend, "For Household Operation—15 per cent of income;" No. 6, with legend, "For Higher Life Expenditures—25 per cent of income," with symbols, fastened to her dress or carried—magazines, sheet music, book, pictures of steamship or camp life, tennis racket, etc. Each of the six representatives of the Modern Budget repeat their placards to the audience as they come in and form opposite the representatives of the Colonial Budget; then both groups unite in singing the following:

A SONG OF THE OLD HOME AND THE NEW

(Tune, "Auld Lang Syne")

- 1 Should old-time homes be clean forgot
And never brought to mind?
The early days, the simple lot
And hearths of auld lang syne?

Refrain: Of mother's mother's days we sing
And future days to be,
Till homes like theirs, of joy and love,
Stand forth from sea to sea.

- 2 They felled the trees in forest glades
Their simple homes to rear,
From guarded flocks and soil well-tilled
Came food their board to cheer.

Refrain:

- 3 We sing this day the hundred years
Of progress for the home—
As toils grow less, may joys grow more
As future changes come!

Refrain:

(2) Other historical comparisons may be worked out, as for example: The Colonial Kitchen and the Modern Kitchen—the fire place vs. the modern range, utensils, etc.; Colonial costume and that of today (see Earle's "Two Centuries of American Costume"); The Colonial girl and the girl of today, her school, sports, dress, books, amusements; the Colonial woman and the woman of today, home duties, social life, civic responsibilities.

C. Plays and "playlets" bearing on the home betterment idea would furnish an appropriate celebration of Home Economics Day. A play emphasizing the pure-food idea, written at the Warrensburg, Mo. State Normal School and elaborated somewhat at Teachers College, N. Y. and entitled "Prince Caloric and Princess Pieta," and laid in the Kingdom of Purefooda, with such familiar characters as King Diet, Dr. Nutrition, the Court Digestor and other worthies, may be secured from the American Home Economic Association, Roland Park, Baltimore, Md., at 25 cents, ten copies for \$1; it will be available about November 1, for use in schools, colleges and clubs. The use of the play may be found an effective way of making contributions to the Richards Home Economics Memorial Fund.

Contributions to the Richards Home Economics Memorial Fund. Schools and clubs are invited to make contributions to the Ellen Richards Memorial Fund in connection with Home Economics Day. Contributions of individuals may be combined or a sum may be raised through an admission fee to the entertainment or observance, or a candy sale or other money-making enterprises may be carried out in connection with the observance. The Richards fund is the endowment fund of the American Home Economics Association; it is invested in charge of a board of trustees and the income alone is used; this has already made possible the publication of two important studies the "Syllabus of Home Economics" and the "Report of the Household Aid Committee." It is also helping to support a field secretary of the Association who will visit colleges, schools, and clubs in the interest of the Home Economics movement. Address of Richards Memorial Committee: American Home Economics Association, Roland Park, Baltimore, Md.

COUNT RUMFORD, SCIENTIST AND PHILANTHROPIST

ARTHUR GORDON WEBSTER

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American Academy of Arts and Sciences*

Rare indeed are those men fortunate enough to have left monuments in three countries sufficient to keep their memory green for a century. At first sight it would seem that such a description could apply only to the great Franklin, who, like the subject of our sketch, achieved fame in America, England, and France as statesman, philosopher, and common sense philanthropist. And yet in the little village of Woburn, twelve miles from Boston, was born on March 23, 1753, a man whose death just one hundred years ago has, within two months, been celebrated in the city of Munich by representatives of the municipality, of royalty, and of science. As a bitter sequel to this solemn anniversary comes the news that after the declaration of war by England it was necessary, in order to prevent the mob from destroying the fine bronze statue erected to Rumford in the Maximilianstrasse, to attach to it a notice that he was not an Englishman, but was born in Massachusetts.

Benjamin Thompson was born of a good old New England family in the comfortable farm-house belonging to his grandfather, Capt. Ebenezer Thompson. The house is still standing and maintained by a society formed for that purpose. When Thompson was twenty months old, his father died, leaving him dependent upon his grandfather until his mother married a second time, after which the residence in Woburn was continued. Young Thompson received the usual grammar-school education, that is, reading, writing, and arithmetic, but he early showed a liking for mathematics and an ingenuity with regard to mechanical matters and the workings of nature that gave promise of his later scientific distinction. It is not surprising that these tastes were not appreciated in the village, and that he had the name of being idle and listless. At any rate his guardians gave up attempting to make him a farmer, and apprenticed him, at the age of eleven, to a store-keeper in Salem, where he attracted attention as a bright, well-mannered young person. From a minister with whom he there came in contact, he learned algebra, geometry, and astronomy. At the same time he began a correspondence on scientific subjects with his school friend, subsequently Col. Loammi Baldwin,

with whom he maintained a life-long friendship never broken by the fact that they were on opposite sides in the war. While still an apprentice, Thompson attended lectures given by Professor Winthrop at Harvard College, walking with his friend Baldwin the eight miles between Woburn and Cambridge. It was in remembrance of the interest in natural philosophy thus acquired that he afterwards founded the Rumford professorship at Harvard.

At the age of nineteen Thompson went as a teacher to Concord, New Hampshire. He was then described by his friend Baldwin as of a fine manly make and figure, nearly six feet in height, of handsome features, bright blue eyes, and dark auburn hair. He had the manners and polish of a gentleman, with fascinating ways, and an ability to make himself agreeable. These personal advantages had a great influence on his future, beginning by procuring him a wife in Concord, a rich widow, fourteen years his senior, who first provided him with worldly advantages, while perhaps at the same time contributing to his expatriation. For it was through her that he was presented to Governor Wentworth, who attracted by Thompson's evident promise, appointed him Major in the Second Provincial Regiment of New Hampshire. This advancement, when he was not yet of legal age, cost Thompson much jealousy on the part of the other officers, and combined with the intimacy which he soon enjoyed with the British governing officials, occasioned the suspicion in which he was held by the patriotic enthusiasts in the cause of American liberty.

Although there is no evidence that Thompson was not in sympathy with the patriot cause, he suffered much humiliation and eventually demanded a public trial, which resulted in an acquittal of a rather inconclusive nature. Finally his house was surrounded by a mob, to avoid which Major Thompson thought it prudent to escape secretly to Boston, leaving his wife and infant daughter to be taken care of by their relatives. It must be added with regret that he never made any effort to see his wife again, and that he did not see his daughter for more than twenty years.

Let us now pass over hastily the most disagreeable things that are to be said about Thompson. When the British were compelled to evacuate Boston, Thompson went aboard one of their ships, and was the official bearer of the news of the disaster to London. This flight caused his estate in America to be confiscated, and him to be looked upon as a traitor. Arrived in London, he attracted the favorable attention of Lord George Germaine, and was made an under secretary

of state, where he had the oversight of recruiting, equipping, transporting, and victualing the British forces. While in London he showed much kindness to American loyalist refugees. Tired of the mismanagement which he saw in London, Thompson concluded to seek active service, and went out to America to command a regiment of cavalry which he had raised among the loyalists. On the voyage over he made a number of experiments on gunnery which were the forerunners of his subsequent experiments on the subject of heat. Thompson was efficient in his short military career in America, but the war came to an end without permitting of much active service. He passed the winter on Long Island, with his regiment of dragoons, and received official compliments from his superiors. Returning to England in 1783, Thompson retired upon half pay with the rank of colonel.

And now begins the interesting portion of Thompson's life, for, in the possession of leisure and means, he determined to travel upon the continent, and received the permission of the King.

At Munich Thompson rose to the height of his powers, and attained world-wide celebrity as the right-hand man of the Elector of Bavaria. After returning to London to secure the King's permission to take service in Bavaria, he received the honor of knighthood on February 23, 1784. During eleven years he now devoted himself assiduously to the service of the Elector of Bavaria. Beginning as colonel of a cavalry regiment, and general aide-de-camp, Sir Benjamin became major-general and minister of war, minister of police, and chamberlain of the Elector. It was in these several capacities that he was able to reform the army, and at the same time, by means of that great common sense and genius for order which were his leading characteristics, to institute those social reforms that constituted him a pioneer in scientific philanthropy. Bavaria was then cursed with a standing army, recruited by continual conscription, which demoralized the rural population, and made thriftlessness, laziness, and crime the great evils of the country. Beggary was rampant, and agriculture was at a low ebb. To this Thompson determined to put an end. As he himself says, he determined "to make soldiers citizens and citizens soldiers." The situation of the soldier was to be made as agreeable as possible, his pay increased, and his clothing made comfortable and convenient. His quarters and barracks were to be made clean and attractive. Schools were to be established in all the regiments, in which the soldiers and their children were to be taught reading, writing and arithmetic. With an economy worthy of Franklin,

Thompson adds that the paper that had served one use might serve afterwards for making cartridges. But even more important, Thompson established houses of industry, in which the soldiers, furnished with raw materials, might by their own industry make all sorts of manufactured articles. They were also put to work as laborers in all sorts of public works, making roads, draining marshes, and repairing river banks. Many of the soldiers were given leave of absence that they might mingle with the peasants near their homes, and by their example encourage agriculture and manufacturing.

Thompson's endeavors to abolish beggary were carried out in the most careful manner, after long preparation. Cavalry patrols were sent throughout the country, forbidden to ask for victuals or forage, and ordered to stop the thieving and begging. General subscriptions were taken up, and so great was the confidence in Thompson's character and methods that large sums were forthcoming and all classes preferred to subscribe rather than pay the prevalent tax to the beggars. Thompson converted a disused manufactory into a workhouse, with kitchen, refectory and bakehouse, with workshops for carpenters, blacksmiths, turners and other mechanics, besides halls for spinners, weavers, and all sorts of textile artisans. Here the former beggars were set to work, and the workhouse furnished clothing for the troops at a considerable profit to the state. At Mannheim a similar establishment was carried on. Thompson related his experience in poor relief in a number of essays, in which the subject was treated in all its aspects.

Besides the creation of industry where it had not previously existed, Thompson devoted much attention to the economical preparation of food, and the study of its nutritive values. The utilization of heat was, from first to last, one of his most absorbing interests, and the results of this study are of importance both to the physicist and to the domestic scientist. He elaborates the method of the production of nourishing soup at a low cost, and urges the adoption of the potato as food, then unknown in that part of the world. In one of his essays we find a treatment of the preparation of the coffee berry for drinking purposes. The construction of kitchens was minutely gone into, and many forms of range, stove, and cooking vessels invented. These were described in a series of essays and papers contributed to the London Royal Society, of which Thompson was early elected a member.

All these activities could not fail to bring Thompson much notice

and procure him many honors and friends. By request of the Elector the King of Poland conferred upon him the order of St. Stanislaus. In a journey to Berlin in 1787 he was made a member of the Academy of Sciences of Berlin, later also of those of Munich and Mannheim. In 1791 the Elector raised him to the rank of a Count of the Holy Roman Empire, with the order of the White Eagle. As a title he took the name of the New England village of Rumford, now Concord, New Hampshire, where his good fortune may be said to have begun. We shall now speak of him by the title of Count Rumford, by which he is generally known.

One of Rumford's chief creations, which remains to this day, is the great park in Munich known as the English Garden. This had been a neglected forest region, which Rumford surrounded with a road six miles in circuit, on which were erected cottages and farm-houses for laborers, while walks, promenades, a small lake, and all sorts of attractions made it a favorable place of amusement for the upper classes and the people as well. All his life Rumford thought very highly of the aristocracy, but was continually solicitous in improving the conditions of the lower classes. The appreciation with which his work was received may be inferred from the marble monument placed in the English Garden during his lifetime, bearing his bust and this inscription:

Pause, stroller. Gratitude strengthens enjoyment. A creative hint of Charles Theodore, seized upon with genius, feeling and love by Rumford the friend of mankind, has ennobled this once waste spot into what thou now seest.

At a later date a fine bronze statue was erected to Rumford in one of the principal streets of Munich.

His exacting labors at Munich finally undermined his health, and he was obliged to visit Italy for recuperation. He then took the opportunity of carrying out his ideas in various Italian cities. As a further mark of the esteem in which he was held, we are told that during his illness thousands of the poor of Munich passed his door in order to offer prayers in the cathedral for his return to health. This in spite of Rumford's being a devout Protestant.

After eleven years of arduous life at Munich, Rumford returned to London, largely for the purpose of publishing his essays. Besides this he had in view another object, namely, the foundation of an institution for the extension of science among the people, especially the advancement of the application of science to daily life. In this

undertaking we see the peculiar combination of traits in Rumford which amount to a sort of snobbishness in his treatment of the great, together with his sincere desire to serve the poor. Thus after addressing an elaborate prospectus to the aristocratic public he proceeds to establish a class of founders at fifty guineas each, with annual subscribers at two guineas, and upon the committees and boards of managers he obtains the names of a number of dukes, earls, and other persons of title.

Rumford had been sent by the Elector as English ambassador to London, but he could not be received in that capacity since he was an English subject. This was to him a great disappointment, which was however mitigated by the success which attended him in his foundation of what was entitled the Royal Institution of Great Britain. The charter of the Institution was granted in January, 1800, and it was organized in March of the same year. It has had during more than a century a most honorable career, and is still one of the most interesting establishments in London. The prospectus, as written by Rumford, was exceedingly original and broad in scope. He urges that it has been by the aid of machinery in procuring the necessities, the comforts, and the elegances of life, that all improvements in the condition of mankind from the state of barbarism to cultivation and civilization have been produced. It was in the elaboration of this text that the Institution was to find its work. Lectures and researches in chemistry and natural philosophy were to be instituted, always with a practical result in view, and museums of all sorts of inventions were to be maintained. All the arts were to be fostered and improved by scientific means. Above all the phenomena of light and heat, and their practical applications in cooking, illumination, and all domestic arts were to be made prominent. Rumford was asked to be the superintendent of the work of the Institution and took up his residence in the dignified building which still houses it in Albemarle Street.

For several years Rumford was the chief inspiration of the Royal Institution, but differences began to multiply between him and his fellow managers, resulting finally in his returning to Bavaria. As a matter of fact Rumford's projects were too elaborate to be carried out by an establishment with the resources of the Institution, and much of its character in popularizing science was given up. Still what it lost in practical utility it gained in the advancement of pure science. The professorships of the Royal Institution have been held by some

of the very leading lights of British science. Sir Humphrey Davy was engaged by Rumford himself, and there made some of the most important discoveries in the new science of chemistry, while Dr. Thomas Young was one of the leading physicists of his time, and one of the two most important contributors to the wave theory of light. But the crowning glory of the Royal Institution was the incumbency of Michael Faraday, the prince of experimental physicists, whose discoveries in electricity and magnetism made at the Royal Institution are among the chief scientific events of the nineteenth century. If Rumford could have lived to see these magnificent discoveries he would have felt reconciled to the disappointment of the moment.

Rumford's chief work was completed at an unusually early age, and unfortunately his last years were not his happiest. From London and Munich he went to Paris, where he fell in love with a remarkable woman, the widow of the great chemist Lavoisier, whose head had fallen in the Revolution. After an acquaintance of several years, these two distinguished persons determined upon marriage, and after a brief but brilliant career together realized their mistake and separated. Rumford retired to a house at Auteuil where he passed his last days in bitterness, with only the company of his daughter Sally, whom he had summoned for a second time from America. He died August 21, 1814, and was buried at Auteuil.

Before describing Rumford's other benefactions to science, which must ever keep his name remembered, let us take a very brief glance at his own scientific investigations. In connection with light we may mention his invention of a simple and effective photometer, for comparing the intensities of two sources of illumination by the process of matching two shadows cast by them. He also invented an improved lamp, but most of his work was devoted to heat. We find long essays on the construction of improved chimneys and fire-places to avoid smoking, and economize fuel. Several hundred chimneys were built over on his plan in London alone, and he gives names of many of the nobility who had adopted them. There is also much space devoted to improved culinary utensils, such as roasters, stew-pans of metal and porcelain, including the now familiar porcelain-lined kettles. But the most important of his investigations to the physicist is his examination into the nature of heat, and his suggestion that heat is not a material substance, but is due to motion. He thus ranks as one of the very earliest founders of the modern mechanical theory of heat. Observing the amount of heat generated in bor-

ing a cannon in the Arsenal in Munich, he made the first quantitative measurements by allowing water to take up the heat produced by a blunt boring-tool rotated by horse-power, and measuring the rise of temperature. If we examine the apparatus developed as a consequence of this experiment we are struck with its similarity to that afterward used by Joule in his determination of the mechanical equivalent of heat, and in fact from Rumford's figures we obtain a value of this quantity not very different from what we now consider the true value. When we consider the state of science in his time we may certainly award Rumford a high place among physicists of his day, not in the least inferior to our celebrated American philosopher Franklin. In fact the genius of these two has many and marked similarities, though Franklin was as great a democrat as Rumford was an aristocrat. Strangely enough the two men seem never to have mentioned each other.

In conclusion we will speak of Rumford's gifts to the Royal Society of London and to the American Academy of Arts and Sciences, of both of which he was a member. In each case this was the gift of five thousand dollars in the funds of the respective countries, for the foundation of a

premium to the author of the most important discovery, or useful improvement which shall be made or published by printing, or in any way made known to the public, in any part of Europe (or America respectively) during the preceding two years, on heat or on light; the preference always being given to such discoveries as shall in the opinion of the President and Council, tend most to promote the good of mankind.

In both countries the award of the Rumford Premium, in the form of two identical medals of gold and silver in each case, has become a much appreciated honor. The Royal Society paid Rumford the delicate compliment of making the first award to him, and it has been successively awarded to some of the greatest physicists in all the countries of Europe, including Fresnel, Faraday, Regnault and Clerk-Maxwell. In America it proved impossible to carry out Rumford's wishes literally, as not sufficient discoveries were made to use up the income, so that the fund increased by a large amount. The courts were finally appealed to, and after a special act of the Massachusetts' Legislature the Supreme Court of the state was authorized to settle the matter. This was done by allowing the Academy to use the income in grants for the promotion of research as well as for the award

of the medals. This plan now works with great satisfaction. The fund has now grown to more than fifty thousand dollars, and something like two thousand dollars is annually appropriated to aid researches in light and heat,¹ with very satisfactory results. The medal is awarded for scientific results, as well as for practical applications such as Rumford had in mind. Among the well-known names of the latter sort who have received the award are those of Edison, Brush, and Elihu Thomson, while the scientific work of such physicists as Michelson, Hale, and R. W. Wood may give an idea of the quality attached to this award.

Finally, at his death Rumford left an annuity and the reversion of his whole estate to Harvard University, for the foundation of a professorship for teaching "the utility of the physical and mathematical sciences for the improvement of the useful arts, and for the extension of the industry, prosperity, happiness and well-being of Society."

This professorship has been held by many distinguished incumbents, its last holder being Prof. John Trowbridge, at present holder of the dignified office of President of the American Academy of Arts and Sciences in Boston.

It is evident that the works of such a man as Rumford are his best epitaph.

FORMAL METHODS FOR PREPARING AND SERVING FOOD²

The author of the book from which the following data are taken was chef to King William and Queen Augusta of Prussia, and this work contains a large amount of information regarding the preparation and serving of food in formal style. In the introduction to volume I is found a comparison of the French and Russian systems of dinner service. These two make the basis of all formal service, including that commonly known as the English. Dinners à la française are really composed of three services or courses, the first two being served from the kitchen, the third from the pantry or "office." The

¹In 1890, Mrs. Richards was granted \$300 from the Rumford Fund for the study of the "Application of Heat to Food Materials." Mrs. Richards and Mrs. Abel used this grant in early experiments in the New England Kitchen, Boston.

²A treatise by Bernard Dubois, entitled "La Cuisine Classique," published in Paris in 1874.

first course or service includes all the dishes from the soups to the roasts. The second begins with the roasts and includes everything through the sweet *entre-mets*. The third is the desert and includes ices, cakes, fruits, cheese, etc. All the dishes for each course or service are set on the table at one time, those for the first service being put in place before the guests take their seats. When all the dishes of one service or course have been passed and removed, all those of the second are brought in and set upon the table and then passed one by one to the guests. The great difficulty with this service is, of course, that of keeping all the dishes of one course hot until they are required, and to avoid this it was, at the time of the writing of this book, considered allowable to pass certain ones direct from the kitchen, such being called *plats volants*.

In the Russian service, everything is passed from the kitchen or pantry, or, in the case of meats which must be carved, from a side table. The distinct advantage, of course, is that all dishes thus reach the guests hot. The disadvantage was supposed to be that the table looked bare and the guests did not know what dishes each course would provide. The former disadvantage is obviated by putting a few *hors d'oeuvres* and possibly some cold dishes from the dessert course on the table. The second disadvantage is obviated by providing menus for the guests.

In comparing this description of formal European usage with that with which we are familiar in the United States, we find that the Russian form is followed for both formal and semi-formal dinners, and that symmetrical balancing of different parts of the menu is rarely attempted. Methods of serving home dinners have been influenced more by practical convenience than by rigid formality, nevertheless it is interesting to see that they represent a cross between the French and Russian systems, the French idea of placing the food on the table before serving predominating when the family does most of the waiting on table, and the Russian practice of serving from the kitchen coming to the fore when a waitress is employed.

EDITORIALS

The Cleveland Meeting. This number of the JOURNAL contains the secretary's report of the Cleveland meeting and in succeeding numbers we shall give our readers some of the excellent papers there presented.

To bring out the most important points of the meeting we have asked expression of opinion from its presiding officer, from an earlier president of the Association who helped in its very formation, and from one of our newest members who found the meeting very inspiring after years of life on the other side of the world.

All who attended the meeting at Cleveland came away, not only with memories of the most cordial hospitality and a delightful week, but also with new inspiration for their work. Nothing could have surpassed the untiring devotion of the Cleveland hosts to all their guests. The addresses were thoughtful and suggestive, the Round Tables full of vigorous debate, and the personal conferences stimulating and refreshing. The attendance was the largest in our history and the company remained until the end of the session. We extended grateful thanks to our hosts and to all who had labored to make the meeting a success. The president of the past two terms remembers with appreciation the kindly and efficient coöperation of her associates. The new president is just the one for the place and is sure to carry our banners forward to the "best meeting yet." Everyone cordially welcomes Miss Van Rensselaer to her natural leadership in the Association.

Probably the event of the meeting was the unanimous adoption of the new constitution. While it does not differ very much from the early constitution, it is more explicit, and it definitely places upon the shoulders of the Council two large responsibilities. One is the keeping in trust of moneys and other property acquired by the Association—thus giving a permanent organization, capable of receiving and caring for funds; the other is the responsibility of choosing from its own body a president of the Association. Both of these changes were seen to be steps in our healthy development. If the Association is to be permanent, if it is eventually to have a center where its property and records

may be housed, if it is to employ a paid secretary, if it is to continue to publish a representative magazine, these changes were essential. The meetings owe much of their importance to the very fact that they are occasional and peripatetic; they stir up enthusiasm, now in Ithaca, now in Cleveland, now in Seattle and San Francisco; they give opportunity for the conference of workers and the acquiring of a common understanding; they may be one color today and another tomorrow, according to the place where the meeting is held. But the steady, permanent work of the Association, expressed in the *JOURNAL* and in continuing propaganda, must be carried on by a comparatively stable body. This responsibility rests now with the Council, which will always represent the experts in Home Economics who have been entrusted with this responsibility and elected by the general group.

All who have followed the fortunes of the Association feel that this places it upon a very solid foundation and that the Cleveland meeting marks a mile-stone in our forward movement.

Another marked feature of the meeting was the readiness with which five hundred dollars was raised toward the salary of the paid secretary, and the generous response of the entire body to the appeals made by Dr. Andrews.

The writer hopes that each succeeding year will carry the Association forward, and she counts upon the cordial coöperation of the entire Association with the new president in her work.

SARAH LOUISE ARNOLD.

If I were to say what seemed to me to be the most important thing about the Cleveland meeting it would be that for the first time the American Home Economics Association has achieved an organized working basis, a plan of procedure that may be expected to really bring results. This may not sound well in print, but everyone ought to know that a constitution which is good enough to set up housekeeping with, needs in the course of years a thorough overhauling to make it one that can be really lived with. That work has been done and well done and the new constitution is a great credit to those who labored over it.

The personnel of the Conference proved that the cause attracts strong men and women who are seeking sane and feasible methods of improving the home, the institution and the school and so helping in the world's work along very important lines.

ISABEL BEVIER.

The full value of an Association meeting is not always recognized by those closest to it—the ones who always attend and frequently participate. Perhaps those who gain the most from it, are those who have been struggling against either geographic isolation or the equally binding limitations of highly specialized tasks. The individual problem finds an easier solution where we are in touch with others and we gain a glimpse of the larger vision and feel that we are together strengthening the supports of existing homes and laying surer foundations for homes that are to be.

If this getting together from east and west, north and south of our own country is good, since it helps to obliterate not only personal provincialism but also that of “our section” and “your section,” will not an international congress be better yet?

We of the United States may easily underestimate the progress being made in both Europe and the Orient. In Australia, in China, Japan and our own Philippines, the study of Home Economics is being advanced by church or state, so that valuable contributions from these portions of the world may be anticipated. Domestic science and sewing classes, model homes, day nurseries, sanitary towns and villages are circling the entire globe. Why not hear such reports at San Francisco?

ANNA MERRITT EAST.

The Journal a Coöperative Magazine. Do our readers realize that our JOURNAL is in reality a coöperative enterprise?

It is owned, edited and published by its readers through the American Home Economics Association. As soon as it can reach the point where the income from subscriptions will pay not only the mechanics of printing but the cost of maintaining the editorial office, that moment begins the accumulation of a fund to be used in promoting Home Economics education and interests along the lines that may be indicated by the Council. That will be a proud and happy moment for the editors.

Who should subscribe for the JOURNAL? First, every teacher of Home Economics in this country and Canada. There are easily five times as many teachers in those branches as when the Association was started six years ago. The number will be still further increased by the requirements for extension teaching made possible by the Smith-Lever Bill. These teachers all need a professional journal. They cannot do without it and keep up to the times. Will every teacher now a subscriber resolve to bring this perhaps unrecognized need to every

teacher of her acquaintance? And if you have an ambitious student who should be put already in touch with the whole field of Home Economics, claim for her the offer to students which follows:

To students of any regular course in Home Economics we make the offer of the *JOURNAL* at half price for one year. This is an introductory cost price and is not renewable.

Second. Every progressive housewife should take the *JOURNAL* and thus respond to the attempt to solve her practical daily problems according to the latest proved knowledge, to give her the information that will help her preserve the health of her family and to make the utmost of her time and money.

Those who are already subscribers can help us to find others if they will. Within a year we ought to have 10,000 readers. And teachers, students and housewives can help us by sending notes of their work and reading, by suggesting needed articles and by forwarding the names of those who can contribute them.

Extension of the Work of the Nutrition Investigations of the United States Department of Agriculture. No department of the general government is so familiar to our readers as is this division of the Office of Experiment Stations, the work of which has been for years under the direction of Dr. C. F. Langworthy. Teachers and housekeepers have availed themselves of the large number of free Farmers' Bulletins on foods, nutrition and other household topics, which this division has issued and they have always received from it full and courteous answers to their questions on a variety of subjects.

It is therefore with great satisfaction that they will learn of the substantial increase in the appropriation voted to this division at the last session of Congress, in order to extend the work and broaden its scope to include the study of clothing and household equipment as well as food. In the words of the agricultural bill it is now made possible to "investigate the relative utility and economy of agricultural products for food, clothing and other uses in the home, with special suggestions or plans and methods for the more effective utilization of such products for these purposes."

We understand that it is proposed by the Office of Experiment Stations to continue and extend the studies of foods with reference to their nutritive value and their economical use in the home, studying both popular and more technical problems. In addition to this, it is proposed to make similar studies of the use of textiles for clothing and

other purposes in the home, of household equipment, and of the labor involved in various household tasks. In the case of clothing and household equipment such questions will be studied as the relative durability, economy and suitability of different materials for clothing, the protective power of different kinds of fabrics, the relative value and efficiency of household equipment and other materials for household purposes, and the relative ease and efficiency of different methods of performing household labor.

Popular summaries of the same general character as those that have proved so useful in the case of food are to be issued on the subjects of clothing, and household equipment, labor and management. Teachers and students may also expect more technical publications which will give experimental details and results. This is good news. The housekeeper on the farm and in the town will be provided with valuable information based on the results of experiments, observations and experience which will help her to more effectively solve the problems arising in her home and will assist her in her efforts toward rational, efficient and economical living.

We heartily congratulate Dr. Langworthy on his added opportunity for useful service in this important field.

Public Health Service Publications. The attention of housekeepers and teachers is again directed to the popular publications on health, sanitation and hygiene, issued by the U. S. Public Health Service. These publications, like the Farmers' Bulletins of the Department of Agriculture, are distributed gratuitously to all who ask for them. Teachers, institute workers and others interested should take advantage of this opportunity to secure reliable information.

We should all of us be glad that the general government through its Public Health Service has recognized another of the housekeeper's needs and has met it so admirably. The Public Health Service is in charge of Surgeon-General Rupert Blue, whose address is "U.S. Public Health Service, Washington, D. C.

HOUSEKEEPERS' DEPARTMENT

The editors of the JOURNAL earnestly request assistance from the readers of this new department. They especially desire suggestions for timely topics on which information should be gathered; data either given directly or by reference to books and articles; and records of personal observation.

LINES OVER MY FIRE PLACE

Friend who dost tarry here,
Share all we have of cheer;
Hearth with aspiring flame,
Bread brok'n in friendship's name,
Hills beyond the pasture bars,
Silent skies with steadfast stars.

Sarah Louise Arnold.

A FEW REASONS FOR COÖPERATIVE BUYING

Summer is not the season for starting new ventures, but on account of the rapid spread of the coöperative idea as offering a method of meeting the increased cost of living, we may be sure that the autumn will see concerted effort in many localities to apply the principle, especially to the distribution of food and other daily necessities. The American Society of Thrift says in reply to inquiries:

In regard to the coöperative buying, it is so evident that it will be successful upon truly coöperative lines, that this Society will probably establish a bureau of home-makers supplies. President Straus is not only convinced that this is practical, but that it will go far to improve general conditions in business over the present competitive system.

What are the advantages in coöperative buying? Not, in general, in the more efficient running of a business, as such—that has been already carefully worked out. The whole advantage arises from the principle that consumer and distributor have but one interest; neither is trying to get ahead of the other, for they are one. To illustrate: The head of a large suburban provision store, in order to explain the necessity for his high charges, said: "For instance, I had to get a good

man and his team off early this morning to the wharf five miles away to buy fish; when ordered for lunch by my customers it must be fresh. The time of that man and his team have to be added to the price of the fish and also the loss of what is left on my hands." Compare this with the method of coöperation reported in the June JOURNAL by the Club of Greensburg, Pa. They took orders in advance for fish to be delivered on a certain day of the week when it could be most advantageously bought. There was in this case no loss whatever. Half of Greensburg ate fish that day, if that may be considered an objection, but it was of fine quality and cost half the usual rate.

Or, take that item in the system of the coöperative store of Montclair, N. J., by which the purchaser who wishes delivery of goods must pay for it, and the requirement of cash down which eliminates bad debts and reduces the cost of bookkeeping; both of which swell the annual dividend to the coöperator who is thrifty enough to have ready money in hand and is willing, by forethought, to reduce the number of deliveries. He is not paying for the other man's deliveries or bad debts.

Most important advantage of all though less dwelt on, since the average housewife has not yet come to a proper valuation of her time, is the let up in that eternal vigilance required by the competitive system to insure high quality of goods, just weight and measure. No one is profiting by her loss, for she is part owner of the store, and she loses no time in running after bargains or trying different dealers. She knows that her steady custom and that of others to whom she recommends the store help form the basis for the wholesale orders and prevents loss in a business whose dividends she shares. All these manifest advantages should give to would-be coöperators the greatest patience while the store is working out its methods, and also the understanding that a competent buyer and manager must be paid a good salary.

The principles on which the coöperative store is run have been thoroughly worked out in Great Britain where such stores have been in successful operation for over a half century, therefore it ought to be an easy matter to adopt their methods to this country, but other forms of coöperation have less to go on and some experimentation will be needed. "From farm to family" is a war cry that has aroused country producer and city consumer; and the recent efforts of the express companies and the parcels post would seem to offer the needed assistance in bringing them together. A country dweller sends in fine cherries to

the commission merchant and receives for his share 3 cents a quart, when poorer cherries are selling in the provision stores at 15 cents a quart; but the next year, in trying to reach the consumer direct the time expended gives him a sorry deficit. He must unite with others by methods yet to be evolved. The coöperative city market will be the next step.

In the December number will be found reports of the progress of the Coöperative Buying Clubs already reported in the *JOURNAL* and also reports of coöperative stores in large cities. The causes of failure of former ventures of this kind will also be pointed out.

THE PROTEIN STANDARD AND THE HOUSEKEEPER

ANNIE L. WING

The method outlined here requires more technical knowledge than is usual among even well educated women. It is practical only for the woman who knows or is willing to learn something of nutrition and food and who keeps herself informed, or is willing to keep informed on what modern science is doing to solve her problems for her.

It is especially useful in study classes for housekeepers, because it gives natural, definite, concrete work for each member of the class, work which she can see for herself has a direct application to her own problem.

The question of how much protein the human body needs, no longer occupies unduly the attention of the student of nutrition. Other phases of the food question are coming to the fore, and protein is falling back to its proper place as one only of our vital needs.

To the educated, conscientious housekeeper, however, it still remains one of her greatest difficulties. She feels that she cannot wait for the physiological chemists to learn all the facts about protein which are needed before the whole vexed question can be made clear, and the apparent contradictions explained; and so while waiting hopefully for this blessed time to come she will probably for the present prefer to follow the middle course and be moderate in protein as in all things. She certainly has the backing of experience in such a decision for it is what most of the human race does when there is any opportunity for selection. Furthermore, she must realize that people actually do live in good health on amounts of protein all the way between the usual extremes and so she will probably feel that there must be less danger involved in large or small amounts than either the parsimonious or the

over-generous would have her believe. She may be content if she is furnishing between 2 and 4 ounces of protein daily per person.

To the housekeeper who wishes to economize, the subject is made more important by being a question of money as well as of health. Except in such cases as carbohydrates supplied by expensive out of season fruits and vegetables, or fat by fancy butter at a fancy price, protein is the most expensive of the nutrients, so that its waste involves a greater loss of money than the waste of other foods. For the sake of both health and economy its use must conform to proper "balance" in the diet, at least as nearly so as the habits and demands of the family will permit, but this busy housewife has no time for weighing out the food, even if it were desirable.

There is no royal road—there never is a royal road to a goal worth reaching—but an accurate enough estimate of the protein provided for the family as a whole, may be made with comparative ease by estimating, *at the time of buying*, the amount of protein in all of the food. In keeping a classified account of the amounts and cost of foods used, which we will assume this modern housewife does, and which, if she wishes to economize, she certainly should do, headings may be chosen which will group many of the articles in such a way that a sufficiently accurate average protein percentage may be found for the whole group; which saves, of course, much reckoning.

To illustrate, let one column on the food page of such a book of classified accounts be headed "grain foods," and let space be provided for record of amount as well as price. This column will include flour, meals and breakfast foods, macaroni, and all the bread, crackers, and cake that are bought ready made. The total for the column will show the weight and cost of all the grain products bought. How much of this is protein?

<i>Kind of food</i>	Protein in certain "grain foods" ¹	<i>Percentage of protein</i>
Bread.....		9-10
Macaroni.....		11-14
Oat breakfast foods.....		16
Wheat breakfast foods.....		12
Other grains less than.....		10

In studying these figures to get a fair average for the whole group, it should be remembered: First, where bread is baked in the house, flour forms the great bulk of the "grain food" eaten; so much so, in fact, that

¹ U. S. Dept. of Agr. Farmers' Bul. 142.

it would be not far out of the way to assume the protein percentage of flour to be the average for all grain products.

Second, the grains having less than 10 per cent protein are those least used in our diet, and probably their lack would be more than made up by the richness of the oats eaten.

Third, when much of the bread is bought ready made, the assumed average for the group would have to be somewhat lower than flour, as part of what we pay for in bread, as in some other things, is water.

After careful consideration of all the facts, 10 per cent seems not too high to assume as the average of the protein content of these breadstuffs. Therefore, of course, the total of the weights in our "grain food" columns divided by 10 will give the amount of protein supplied by this type of food.

Eggs and milk should each have a column, for each has a distinct value and importance of its own.

Meat and fish are sufficiently alike to be grouped together, and studied for their average percentage as bought. The different kinds and cuts vary more in value than do the grains but in making calculations, it will be enough for all practical purposes to assume that meats such as beef, as purchased, that is, raw meat as it comes from the butcher, contains 15 per cent protein; fat meat, such as pork chops, 17 per cent; fat salt pork and bacon 8 per cent; fish 10 per cent; and cheese 25 per cent protein per pound.

In the case of milk the protein content is 3.5 per cent per pound (that is per pint), and with eggs it is 12 per cent, 8 eggs being equivalent to a pound.

In the case of dry legumes (beans, peas, lentils, cowpeas, etc.), the protein content is 22 per cent per pound.

These foods, with the cereal food and breadstuffs mentioned above, represent the principal groups which are sources of protein in the diet.

For the protein foods bought occasionally and in small quantities, and for the so-called non-protein foods, still less painstaking methods can be employed.

Practically all our foods except sugar, refined starches, olive and other oils and some of the culinary fats, furnish more or less protein. The amounts are often very small, but they should be counted, for "many a little makes a muckle," and a surprisingly large "muckle" in this case. To write down these many small items day by day in any formal way would take more time than any housekeeper could or should give. But with a table giving the protein value of foods as

purchased and her own classified account giving the kinds and amounts of these articles bought, it is easy enough to find their approximate addition of protein to the family diet. From the total of the protein from all these sources must be deducted a proper amount for unavoidable waste after buying and for losses during digestion.

If such a record is kept for but one month, it will be a revelation to the housewife. She will never again be so ignorant of her raw material. In fact, there should be no need of keeping up this recording regularly. It can be done at intervals for perhaps a month at a time, as the family conditions change, and there seems need of it. The housekeeper will gradually learn to "sense" the value of her food, as the Western cowboy did the weight of his cattle. I knew one underwitted boy of twelve who could "guess," well enough for selling purposes, the weight of a bunch of cattle across the field. Constant practice and a lively interest had made him an expert in this one thing.

A group of six women kept an account for one month of the amounts used in their households of three of the least variable important articles of diet—eggs, milk, and grain foods.

It was found that on an average 8 ounces of "grain foods," 2 ounces of eggs and 10 ounces of milk, were consumed per person per day, which would supply respectively 0.8, 0.24 and 0.53 ounces of protein, or a total of 1.57 ounces.

Besides this, an estimate was made of what was considered a fairly typical amount and variety of fruits, vegetables, butter, cocoa, and small sundries, which amounted to another $\frac{1}{2}$ oz. protein, making in all about 2 oz. per day per man. This did not take into account the meat and fish served in these families two or three times a day (and previously looked upon by these women as the main sources of protein); nor did it include the legumes, cheese, and nuts eaten freely. Was not this something of an eye-opener?

The housewife needs knowledge so that she can know whether her table is reasonably right or not. If it is, she can feel satisfaction; if it is not, she will want to make it what it should be.

SERVING A FOUR-COURSE CHURCH LUNCHEON

MRS. JOHN F. WOODHULL

The Union Missionary Society of our city wanted to have a luncheon but the problem was what church would undertake to feed three hundred and seventy-five people? Ours was the only one that had the equipment to accommodate the large number and so we began to organize for the task. A decorating committee, a serving committee, and a kitchen committee were appointed and their work assigned. The kitchen committee was to buy the food and prepare it at a maximum cost of thirty cents per capita. We were all inexperienced in catering for the public but as most of us do our own work we did know how to cook but that was all. The chairman of the kitchen committee planned a menu which she thought might do and invited the committee of sixteen with the pastor and his wife to come and lunch with her and criticize it.

Menu—Pea soup, imperial sticks; chicken, rice, peas, watercress, olives, rolls and butter; ice cream, cake; coffee, with cream and sugar.

The chairman made a note of everything that was done in preparing this luncheon for eighteen. She had a pad fastened to the wall where she noted the exact quantity by weight or measure, the exact price of each thing, the time required for cooking, also for preparing the various dishes. The committee having approved of this luncheon for eighteen, the rest was comparatively simple, just multiplication and division.

We planned to take three days for preparing the final luncheon which was to be served on a Wednesday at one o'clock. We found out just when each member of the committee could help and then planned the work accordingly. The tasks for each day were typewritten and tacked up on the wall so that when each one came in she could see at once what was to be done. The first day there were fifty-nine fowls to be boiled whole. There were ten good workers to prepare them and nobody felt overtaxed. We used three wash boilers to cook them in, filling each one three times, using the same stock. In that way rich stock was made for the gravy and for the soup. While the fowls were cooking we washed the rice, and prepared the watercress. We wanted to make everything as simple as possible for the final serving and also be sure that the proper amount was placed on each plate. We washed the watercress and divided each bunch into eighteen parts

and laid the parts in rows on pieces of cheese cloth then rolled them up and laid them on ice. To the surprise of some, they were crisp and green three days later, and were easily served, each little bunch being by itself as we unrolled the cheese cloth. Most of the committee were through with their work on Monday before noon, only three or four remaining while the fowls were boiling. Tuesday we cut up the fowls and laid them in dripping pans, having greased the pans first with salt pork fat. We laid a piece of white meat and dark meat together, one on top of the other, enough for one portion and eighteen portions in each dripping pan; then brushed them over with the salt pork fat and dredged them with flour, pepper, and salt, all ready for baking the next day. We opened the peas that day, also the cases of Knorr's soup, which comes in powder form. We removed the fat from the stock and mixed the powder with cold water ready to stir into the boiling water the next day. We also cut the butter, each pound into forty pieces, and put it into bowls of cold water. Dishes were counted and placed in order on a side table.

The next morning all the committee arrived early. We boiled the rice in wash boilers twenty-five minutes with eight times the quantity of water, then drained it and put it into smaller kettles to dry off and later it was put into a very ingenious warmer which will be described later. The gravy was made in a wash boiler. Five quarts of flour for thickening had to be mixed carefully and strained into pitchers. Four of us mixed it in small quantities in separate bowls. The chicken was baked in hot ovens about fifteen minutes and the gravy, seasoned with salt, pepper and onion salt, was poured over it in the dripping pans and the twenty-five pans of chicken were packed away with the rice to be kept hot in the wonderful warmer until the luncheon hour should arrive. The rice and the chicken were thus out of the way early and the stoves were clear for the soup, coffee and peas. The soup took two wash boilers, the coffee two wash boilers and the peas were warmed in two five-quart double boilers. The powdered soup mixed with cold water was stirred into the boiling stock and allowed to boil twenty-five minutes. Eight pounds of coffee soaked one hour in sixteen quarts of cold water were added to forty-eight quarts of boiling water just before luncheon was served.

Everything was ready and the committee had time to sit down and chat for an hour before the guests arrived. Thanks to the precious warmer we were not fretting lest the luncheon should be spoiled.

We each had our particular post for serving and each one understood that she was not to leave her post for anything.

The arrangement of the food supplies and the relative positions for waitresses, passers, dish washers, and other helpers made possible the result that three hundred and seventy-five people were served to the four course luncheon inside of one hour.

The following is a list of the quantities used and the cost of the same:

Knorr's Pea Soup, 2 doz. cases.....	2.20
Fowl, 242½ lbs.....	51.85
Pork, 3½ lbs.....	.60
Rice, 20 lbs.....	1.50
Peas, 20 cans.....	2.25
Watercress, 20 bunches.....	.75
Ice Cream, 12½ gal.....	16.50
Coffee, 8 lbs.....	2.16
Flour, 8 lbs.....	.25
Cream, 11 pts.....	1.00
Sugar, 10 lbs.....	.85
Stuffed Olives, 2 gal.....	3.30
Butter, 9 lbs.....	2.79
Salt.....	.09
Cake, 23 lbs.....	5.17
Rolls, 400.....	3.00
	<u>\$94.26</u>

\$94.26 divided by 375 makes the cost per capita just about twenty-five cents. The only thing contributed was the imperial sticks.

In the dining room there were twenty-five tables and fifty waitresses, two for each table. This large number of waitresses found their work facilitated by serving by way of the side aisles and returning by way of the center aisle, so that no one passed another with her tray. Water, rolls, butter, etc., were kept in an adjoining room and two extra waitresses kept all tables replenished with these things. There were also two head waitresses to supervise the whole.

Mr. Woodhull gives this account of how the improvised warming cabinet was made:

Sixteen members of the "Ladies' Aid" had cooked 240 pounds of fowl and 20 pounds of boiled rice to serve to 375 persons in a church, and the pastor and I were expected to devise some way of keeping all this steaming hot for five hours without burning it or drying it up. The clergyman and I were suffering from brain fog and needed the refreshment of manual labor.

Having calculated the volume of 375 stomachs, or at least the volume of this

feast, to be 16 cubic feet, we built a closet of wood (which cost \$3.37) 4½ feet high, 3 feet wide and 1½ feet deep. This was divided by shelves into four sections and the whole was closed by four doors in front. A heating flue entered at the bottom and passed up through all the four sections. It remained to determine what source of heat and how much would be required to keep this mass of food hot without burning it or the cabinet itself. When inquiry was made as to what the temperature of "hot" food should be, there were none to answer, and so we experimented, visiting many dinner tables and unceremoniously plunging the bulb of a thermometer into all sorts of meats, vegetables and drinks which were declared to be suitably hot. Before the results of these experiments were known, no one would venture an opinion as to whether it would be desirable to serve food at the body temperature (98°), at the temperature of a hot bath (105°), at the temperature of boiling water (212°), or at the temperature of a baking oven (400°). The experiments, however, showed that there is a remarkable agreement as to when foods are suitably hot. This temperature was found to be close to 150° for all kinds of food and drink. This fact contained a surprise for it had been predicted that persons generally would require that tea and coffee should be somewhat hotter than solid foods.

The entire cabinet was covered with two layers of building paper and one layer of white oil cloth to conserve the heat. By an extended process of reasoning and calculating we finally arrived at the conclusion that gas would serve our purpose better than steam or electricity, and that a gas burner which would consume 10 cubic feet of gas per hour would be required to keep the whole mass of food and cabinet at about 185°, thus allowing a fall of 30° while the food was being transported from the warming cabinet to the mouths of the consumers. A flue made of wire screen 5 by 15 inches in cross section entered through the bottom of the cabinet and extended to the top, but was not open at the top. For a short distance below the cabinet the flue was made of sheet iron and the gas burner was introduced into the bottom of this. The burner was made of a piece of gas pipe closed at the end and having very small holes bored along its side. These holes passed 10 cubic feet of gas per hour to the numerous little flames and the hot products of combustion were required to circulate through the cabinet and finally pass out at the bottom of the flue. Thermometers were placed in various parts of the cabinet and the temperature was found to vary between 165° and 185°.

Thus we kept 24 dripping pans of cut-up chicken and half a dozen kettles of rice at about 175° for five hours, burning 50 cubic feet of gas at a cost of five cents.

ONE-PRICE SELLING FROM A HOUSEKEEPER'S POINT OF VIEW

ANNIE L. WING

In a city suburb is a clean, bright, businesslike, little store, where one man and a boy sell a limited number of articles of food, among them certain canned goods. The prices are decidedly lower for the same grade of goods than in the nearby grocery stores. There are no customers except those who really want to economize. Each person must pay cash and carry home his purchase. There is no bookkeeping, no cashier, no office expenses, no waiting for money due, no bad debts, no

expense of men and teams for order taking and deliveries. And the housekeepers get the benefit of all these savings. Why shouldn't they? Isn't paying cash and carrying home packages a perfectly legitimate way of cutting down the cost of living?

This little store has the further advantage of being one of a chain forming a concern large enough to purchase in quantities from the best sources, and to employ really expert buyers and supervisors. The efficient management shows itself in a general air of prosperity, as well as in good quality and low prices.

There are also in the village numbers of ordinary grocery stores for those who do not need, or choose, or who are not able, to save their money at the expense of their time and convenience. Such a store sends out daily a man and team to take one's order, and later sends them again to deliver—perhaps a yeast cake. The customer must pay of course for this very expensive service.

These stores open accounts with everyone, and they must unquestionably put their prices high enough to cover all losses. The customer who pays his bill must pay the bill also of the man who does not. He who pays his bill promptly must pay a share of the interest on the money due from the man who lets his bill run on unpaid for months. Each must pay the price not alone of the food he buys, but also of the service and accommodation rendered.

It would not be just to force this grocer to sell for a price on which the little cash store makes a fair profit. If it were required of him he would have to close his doors, and the community would be deprived of a needed convenience.

Neither would it be just or expedient to make the cash store raise its price to suit the requirements of the charging, delivering, accommodating grocer. To do so would not only add to the burden of those least able to bear it, but it would also tend to discourage that efficient business management about which the world is at present a little mad.

Leaving this suburb, let us take two typical city department stores. The first is a handsome, spacious, modern building on the most desirable corner of the most desirable street in town. The land on which it stands is in itself a fortune. There are plate glass windows, broad aisles and stairways, mirrors, expensive decorations, commodious rest rooms with easy chairs and writing tables with stationery and the daily papers, there are unlimited delivery with much tissue paper and many boxes; easy credit; goods sent on approval; and, in short, all of the luxuries demanded by the well-to-do and for which they are willing to pay.

The second, in a far less expensive section of the city, is made up of two or three old buildings thrown together and cheaply remodeled, with a step up here and two or three steps down there; and it is used to its utmost capacity. It is as large, let us say, and as efficiently managed as the handsome store, but it is for the accommodation of people who must make every penny count, and who are not able to pay for extras.

Does anyone doubt that the second store could make a fair profit selling articles, for instance, of kitchen furnishing at a price which would bankrupt the first store if it were persisted in? The "one-price" set by the manufacturer can not suit the circumstances in both cases, and it may not suit in either.

In Europe the poor are allowed to go into the fields after the harvesters and glean whatever is left. In American cities there are immense gleanings which should somehow be used to the best advantage. Goods unavoidably left over at the end of the season, the excess of injudiciously bought stock, damaged (often only superficially) goods, bankrupts' effects, stock in the hands of executors, goods selling out on removal or on going out of business, all of which are often made the excuse for dishonest practices. Cannot the government find a way to stop these frauds without refusing to allow us to buy such goods at other than the original "one-price?" Can it if it tries make us pay that price for these gleanings? Should we not instead go to the luxurious store and demand fresh goods?

Perhaps these are superficial objections. There may be weightier arguments on the other side, but they are honest objections based on actual conditions, and should be given due consideration.

THE "UNOCCUPIED" HOUSEKEEPER

It seems that our English sisters also chafe under the slighting classification given to the married woman in the census, where the official returns put her among the "unoccupied." These are presumably the wives of the six million married men who are wage earners and as the *Illustrated London News* points out, "except in the very limited class of society where abundant service is supplied out of a large income, the wives responsible for the household tasks often toil harder and longer than most wage earners."

The reason for this anomaly in census returns in all countries would seem to be a lack of any standards by which the value of the housewives'

labor can be appraised, and the fact that it does not come to her in a pay envelope. Are these difficulties too great to be overcome? The matter would seem to be now in the state that the allowance of the unmarried daughter was a generation ago. The father said, "Come to me for what you need." This unsatisfactory and wasteful method has been upset by the determination of the young woman in question to have a definite sum set at her disposal if she is worth keeping at home. Otherwise she will go out and earn it for herself.

Will our readers suggest a plan by which the housewife who cannot so easily substitute outside earning shall receive a definite fair sum for her labor? What stands in the way?

TEACHING GIRLS TO DRESS TASTEFULLY

Teaching Girls to Dress Tastefully is the title of a suggestive article in the June number of *Home Progress*, by Mary A. Laselle. She tells of a school of practical arts where the principal obtained the coöperation of drawing, sewing and millinery teachers in the study of the shape and trimming of a hat that should bring out the best points in the face of the wearer; the cut and adornment of the blouse suitable for daily wear; the material, cut and color of the skirt that should not emphasize the trunk but should hang gracefully from the hips. Fashion plates, silhouettes, drawing outlines, and other illustrations were used in the study, and the result was a chart drawn up by the girls themselves which was as follows:

A schoolgirl should have—First, a neat, simple hat in which the trimming follows the contour of the hat, and the shape and color are becoming to the wearer; second, her hair neatly and simply arranged in a manner that is best suited to the outline of her face; third, a clean laundered blouse, or a blouse of good cut forming part of a one-piece dress; fourth, a modest well-cut skirt that does not distort or caricature the form, of a color and a material suitable for much wear; fifth, clean, whole stockings and underwear; sixth, well-fitting shoes with low heels.

The article says that a great improvement was observable in the dress of the girls throughout the building, that the good example spread to the clerks in a department store and led to the offer of a prize by the editor of a local daily for the best essay by a high school girl on the dress of the young woman in business.

Two Clothing Budgets prepared by the class above mentioned. The motto—"No beauty without fitness of purpose."

*A girl's outfit for one year; age 14 to 17;
cost \$75*

(Some of the underclothing was made at home)

4 summer vests.....	\$0.12½	\$0.50
2 winter combinations.....	0.75	1.50
3 pr. white drawers.....	0.25	0.75
2 corsets.....	1.00	2.00
4 chemises.....	0.50	2.00
2 flannelette petticoats.....	0.25	0.50
2 petticoats.....	0.60	1.20
4 nightgowns.....	0.50	2.00
6 pr. stockings.....	0.25	1.50
2 middy blouses.....	1.50	3.00
2 shirt waists.....	1.87½	3.75
2 skirts.....	3.50	7.00
3 dresses.....	4.00	12.00
1 winter coat.....	5.50	5.50
1 spring coat.....	3.75	3.75
3 hats.....	2.00	6.00
4 pr. gloves.....	0.75	3.00
4 pr. shoes.....	2.50	10.00
2 pr. rubbers.....	0.50	1.00
10 ribbons.....	0.30	3.00
handkerchiefs.....		1.50
accessories.....		3.55
Total.....		\$75.00

*A girl's outfit for one year; age 14 to 17;
cost \$35.97*

(Most of this clothing was made at home)

2 summer vests.....	\$0.12½	\$0.25
2 winter combinations.....	0.75	1.50
3 pr. white drawers.....	0.25	0.75
2 corset waists.....	0.50	1.00
3 corset covers.....	0.25	0.75
2 flannelette petticoats.....	0.25	0.50
1 white petticoat.....	0.85	0.85
1 black petticoat.....	0.75	0.75
2 nightgowns.....	0.50	1.18
4 shirt waists.....	1.00	4.00
1 dress skirt.....	2.70	2.70
1 cotton dress.....	2.50	2.50
1 wool dress.....	3.50	3.50
1 coat for two seasons.....	6.50	3.25
1 summer hat.....	1.00	1.00
1 winter hat.....	1.24	1.24
1 pr. wool gloves.....	0.25	0.25
1 pr. kid gloves.....	1.00	1.00
4 ties.....	0.10	0.40
6 ribbons.....	0.15	0.90
6 handkerchiefs.....		0.25
6 pr. stockings.....	0.12½	0.75
3 pr. shoes.....	2.00	6.00
1 pr. overshoes.....	0.70	0.70
Total.....		\$35.97

POWDERED SUGAR OF COMMERCE¹

Those sugars upon which most work has been done in the process of manufacturing sell for high price, but the cost to the consumer of such grades as cube sugar and powdered sugar is entirely out of proportion to the increased cost of manufacture.

Both cube sugar and powdered sugar are usually made from the same grade of stock as granulated sugar. The cube sugar has, however, been crystallized in lumps or "sugar loaves," and is then sawed into slices and finally into cubes. Powdered sugar has been ground in a mill similar to that used in making flour, and then sifted through bolting cloth so as to be of uniform fineness. It is also very important that powdered sugar should be thoroughly dried so as to prevent its caking upon storage. These sugars are sometimes colored blue with ultramarine so as to cover up the slightly yellow tint which is due to the retention of a small quantity of molasses. This process is of the same character as the bluing of clothes in the laundry, and is practiced for the same purpose.

¹On the Powdered Sugar of Commerce. E. H. S. Bailey and H. I. Jackson, Trans. Kans. Acad. Sci., 26, 1912, pp. 27, 28.

Something over twenty samples of the finest grade of powdered sugar, namely, the XXXX, have been collected by Kansas state inspectors and examined in the laboratory. As one requirement for powdered sugar is that it should be fine and free from lumps, some of the manufacturers have been putting a little starch into the sugar during the process of grinding. This can hardly be called adulteration, however, as it is not put in with the object of cheapening the product, but to improve its quality for a particular purpose. Starch is, furthermore, a food product, although less expensive than sugar. A mineral substance, if added to the sugar, would be considered an adulteration, as mineral substances are especially forbidden for use in sugar or confectionery.

Of the twenty samples analyzed five contained starch, and the maximum quantity found in any sample was 4 per cent. In one package, in which the label stated 2 per cent of starch was present, no starch was found. It is not uncommon, however, to find that the label does not truthfully describe the contents of the package. There was no indication of the presence of sugars other than pure cane sugar in the samples examined.

Although the pure food and drugs laws are fairly well enforced, there is always the tendency in the trade to encroach upon them as far as possible. By ingenious labels, written by well-trained counsel, products are kept on the market almost in spite of the efforts of the authorities. Although the glaring frauds are eliminated, there is just as much need as ever for vigilance on the part of those who are working to protect the consumers from misrepresentation in foodstuffs.

WHIPPING CREAM

When cream is beaten rapidly, air is entrapped in it with the formation of a great number of small bubbles which are held together by the gelatinous consistency of the cream and the whole mass is transformed into a firm white foam not unlike the beaten white of egg. If the beating is continued too far, a complete separation of the butter fat from the other components of the cream takes place and butter is formed.

Considerable study has been made of the factors affecting the whipping property of cream. Experiments in which samples of cream were whipped with an egg beater under different conditions showed that the fat content, temperature, and acidity of the cream exerted the greatest effects upon its whipping qualities. These experiments showed that to obtain the best results:

1. Cream for whipping purposes should contain from 25 to 40 per cent of butter fat and not less than 20 per cent.

2. The cream should be kept at 35° to 45° F. for two hours or more before whipping. This is the temperature of a good icebox.

3. The presence in the cream of a small amount of lactic acid (the acid formed when milk sours) improves its whipping quality, and cream for whipping should be from twelve to twenty-four hours old to allow time for the formation of some of this acid.

When these three conditions, especially the last, are wanting, success is obtained by adding one-tenth to three-tenths per cent (or one-fourth a teaspoonful to a pint) of commercial lactic acid which can be purchased at any drug store

Pasteurised cream has the appearance of being less rich than raw cream, and owing to its thinness and the fact that it is less viscous it is more difficult to whip. In this case also experiment has shown a remedy. To 150 parts of the cream is added one part of a solution prepared by dissolving quicklime in a solution of granulated sugar, an amount of lime which has no harmful physiological effect. This solution which is called "viscogen" or sucrate of lime may be purchased or it may be prepared in the home as follows:

Dissolve $2\frac{1}{2}$ pounds of granulated sugar in 5 pints of water. Pour upon 1 pound of quicklime 3 pints of water, strain and add to the sugar solution. Shake frequently and allow to stand about three hours to settle. Siphon off the clear liquid which should then be kept in tightly stoppered bottles, as the air reduces the strength of the solution somewhat. About three-fourths of a teaspoonful of this solution should be added to a pint of cream which it is desired to thicken. The cream should be cooled to about 60°F. and the "viscogen" thoroughly stirred in to insure a homogeneous mixture. This is for home use alone, as the food laws of most states forbid the sale of milk to which anything has been added.

Powdered sugar, cornstarch, caramel, gelatin, or junket, which are sometimes added to cream which is to be whipped increase the whipping property to a slight extent. The addition of egg white is also effective. Vanilla has no effect.

RULES FOR THE MILK BOTTLE

1. Does your milk man come before you are up? Then provide in the coolest place possible on your porch or back steps a wall cupboard or a box with hinged cover, or put up a shelf above reach of the passing dog or cat whose delight it is to lick off what may ooze out around the cap of the bottle. Saliva, dirt and possibly disease germs are left. In the same box place the empty bottles with order for next day. A spring clip will hold the latter in place.

2. Put the milk in the ice box as early as possible. By order of the health board it came to you iced, and the temperature should not be allowed to rise.

3. Before opening the bottle hold it under the hot water spigot for a moment, and wipe dry with a clean cloth. This removes what may have been left by flies, dust of the street and dirty hands of the milk man.

4. To open. If your milk company does not use the cap with an ear for lifting out or one which fastens over the bottle, then buy one of the metal tops with sharp screw in lower side with which to take out the cap. The top is then used on the bottle in the ice box, for it is easier and better to keep in this way what is left than to pour into a pitcher or other open receptacle. A nutpick is also good for lifting the cap. Never push the cap into the milk.

5. Refuse to buy milk that is not delivered in bottles, and do not forget that tickets and money are always dirty, and should not be put in bottles or cans.

HOW TO KEEP BREAD FRESH

Recent experiments, both in this country and in Holland, to answer the questions, "What is fresh bread?" and "Why does bread grow stale?" have disclosed some very interesting facts regarding the effects of wrapping bread for purposes of keeping it fresh. The quality of bread which is known as "staleness," according to some investigators is ascribable to a change in distribution of moisture from crumb to crust, and not to a loss of moisture, as is commonly said. According to this new work, the important factor in staleness is unfavorable temperature. These experiments have shown that to insure freshness, bread must be kept at a rather high temperature or at a very low temperature. If kept at an average temperature, bread becomes stale. If bread is wrapped while still warm in a comparatively nonconducting

material, it will keep fresh for a relatively long time, if not subjected to a very low temperature after wrapping.

The experiments have shown also that the loss of weight for unwrapped bread was twice as great as for wrapped bread, and that wrapping prolongs very much the saleability of the bread. The experiments seemed to indicate that if bread is wrapped when just warm, it does not get mouldy and its flavor is unimpaired, while the crust becomes soft but not tough, and that this method of procedure should make it possible for bakers to avoid night work in order to deliver fresh bread the following morning. About the only objection that can be raised to this is in the case of bread where a very crisp crust is desirable, like French bread, rye, etc. The temperature at which bread keeps fresh ranges between 122° and 194° F. and below 32° F. The temperature at which it becomes stale is about 68° F., or normal room temperature.

HELP FROM YOUR STATE

If the women of your town want a course in cooking or sewing or household sanitation, write to the Extension Department of your State University or Agricultural College and ask for it! It may turn out to be just as simple as that. You may receive notice that if your group of women are willing to pay \$1 apiece as a nominal fee for expenses incurred by the college, and provide a lecture room with stove suitable for demonstration they will be furnished a teacher and outfit free for a week's demonstration course. At least this is what is offered in extension schools by Cornell University to the women of New York State. And such a course is pretty sure to help in solving home problems.

And the same state sends out through its Health Department a letter to the mother of each child whose birth is reported to the Department. It reads in part:

Dear Madam: Through the report made by your physician to the local health authorities, I learn that you have recently given birth to a child. I know how important this is to you and I want you to feel that it is also an important event in the great State of New York. I wish you to feel that the State Department of Health was created and is supported by the taxpayers to give your little baby every chance to grow up to be a strong, healthy citizen.

Enclosed are pamphlets giving directions for keeping the baby well and advice is given about consulting the physician.

Are all states doing as well for their babies?

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Rural School Conditions in the United States. Editorial, *Jour. Am. Med. Assn.*, lxii, 1914, pp. 1255-1257.

MISCELLANEOUS

Good Housekeeping—What Is It? Anne L. Wing, *Home Progress*, iii, 1913-14, no. 6, pp. 282-287, figs. 6.

What the Department of Agriculture is Doing for the House Wife. A. D. Holmes, *Alumni Bul. Univ. Virginia*, ser. 3, vi, 1913, no. 4, pp. 546-554.

Outline Lessons in Housekeeping, Including Cooking, Laundering, Dairying and Nursing. For use in Indian Schools. *U. S. Dept. Int., Off. Indian Affairs*, 1911, pp. 23, fig. 1.

Demonstration Lectures in Domestic Science (Foods and Cooking), Sewing and Home Nursing. *Ontario Dept. Agr. Bul.* 215, 1913, pp. 19, figs. 5. (Outline of the courses are given, with a statement of some of the benefits derived from such work.)

Household Conveniences. *Farmer's Guide*, xxvi, 1914, no. 3, p. 69, figs. 4. (A brief description is given of photographs of household conveniences in farm homes which "any farmer's wife might have at comparatively small expense.")

How a Gasoline Engine was Made to Help with Housework. X. W. Putnam, *Farmer's Guide*, 26, 1914, no. 3, pp. 67, 68, figs. 4.

Labor Saving Devices: Modernizing an Old House. Mrs. F. F. Showers, *Farmer*, xxxii, 1914, no. 3, pp. 79, 86, figs. 2.

An Ideal Fuel Manufactured out of Waste Products. G. E. Mitchell, *Nat. Geogr. Mag.*, xxi, 1910, no. 12, pp. 1067-1074.

BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS at the price listed.

The People's Health. By Walter Moore Coleman. New York: The Macmillan Company, 1913, pp. 307. \$0.70. By mail of the Journal \$0.82.

This is a text book in hygiene and sanitation, intended for use in the public schools—suitable, we should judge, for eighth grade or high school pupils who have already had a course in human physiology.

The chapters cover a considerable range of topics—ventilation, water supply, milk supply, food adulterations and preservatives, food values, hygiene of eating and of the teeth, nature of germ diseases and the body's resistance, human and insect carriers of infection, hygiene of exercise, posture and mental attitude (together with various other details of personal hygiene), house construction and management, school sanitation and medical inspection of school children, work of public health departments, urban, rural and industrial hygiene. Many of the chapters include suggested experiments, observational work, or supplementary readings.

The material presented is abundant, vital, interesting, and up-to-date. For example the second chapter, *Fresh Air and the Prevention of Disease*, is an especially happy treatment of a most important subject, which is usually inadequately treated with antiquated stock remarks on the chemical impurities of expired air, the number of cubic feet of fresh air per hour required for each person, etc.

Verbal illustrations are apt, numerous, and such as are not to be found in texts, but could come only from extensive acquaintance with the subject of public health.

The general aim of the book as stated in the preface—"the author believes in the building of character by the school, and that the study and the practice of public health will contribute to that end"—is noble in conception, pedagogically sound, and ably fulfilled throughout the book.

The illustrations are widely gathered from various sources, and many of them are invaluable. Occasionally, however, one feels inclined to suggest redundancy, or even lack of clearness; as in the case of the drawings of the white blood cell (pp. 9 and 11) the problem, for the uninitiated, would doubtless be, which is the devourer and which is the devoured?

Inaccuracies are exceedingly difficult to avoid, in a book of this scope and character; it is perhaps ungracious quibbling to point out that not bacteria but yeasts are usually the cause of the rising of dough (p. 13); that the method of feeding typhoid patients described on page 51 is fast becoming antiquated.

Many will regret that the case for pasteurization of city milk supplies was not made a stronger one, in view of the change of heart which many prominent sanitarians have had concerning the necessity for the pasteurization of even certified milk, since the Deerfoot epidemic of 1911, and similar experiences.

"People who eat well-flavored food will not often feel depressed" (p. 89) is a specimen illustration of such looseness and inaccuracy of statement as should be avoided. "The acids in fruits purify the food tube" (p. 89) needs further amplification and also some careful qualification, in order to present any definite and accurate notion to the child's mind. Some of the statements concerning the dietetic value of white flour, bread, and sugar as compared with whole wheat bread and brown sugar, are certainly misleading.

Details which would better have been omitted are the picture of the man expectorating (p. 114), the statement as to the number of pounds of manure daily consumed in Berlin's milk supply, the picture of the mutilated hand (p. 169). Surely the lessons thus enforced can be otherwise brought out; we do not wish to make the text he uses an object of loathing or disgust to the sensitive child.

The Child: Its Care, Diet, and Common Ills. By E. Mather Sill, M.D., New York: Henry Holt and Company, 1913, pp. 207. \$1.00. By mail of the Journal \$1.10.

There is use in these days for a great variety of books and articles which explain clearly and helpfully the various phases of infant and child care. Dr. Sill's book presents in brief form a great many useful facts and suggestions about healthy and ailing babies.

However, to one who has thought much about books of greatest efficiency in this field, the work under discussion presents more defects than excellencies. It presents the common weaknesses of a book which has apparently been constructed in haste by the busy medical practitioner and which so often sets forth an abundance of material out of the physician's knowledge and experience, while it seems to fall short in many important particulars of the book best suited to the mother's needs.

The explanations and suggestions are often couched in terms too technical and make the text less easily understood and less readily and practically useful for the average reader who needs such instruction most. No clear distinction is made between the remedies that the mother may safely give in following her own judgment and those which should be given only on the immediate advice of the physician.

The author makes the mistake of advising too much specific medical treatment of disease in conditions where two or more lines of treatment might be of almost equal value. With reference to such situations it seems more advantageous for an author to point out clearly the mother's responsibility and the general principles of treatment so that the mother's mind may be left unprejudiced with reference to any rational procedure which the attending physician may advise.

It is extremely doubtful whether diluted whiskey or brandy should ever be given to a child, except upon the physician's direct orders, and instances are very rare when diluted brandy or whiskey for the child represents the best prescription available to the doctor.

In discussing treatment of vomiting, the author advocates the use of the stomach tube (which can in general be used only by the doctor or a trained nurse) and omits the simple expedient of having the baby drink hot water with perhaps a little soda in solution, which will wash the stomach out as it is regurgitated.

The advice is in places too general, as when the mother is advised to "not allow the baby to over exercise" but no clear indication is given of the line between wholesome and excessive exercise.

In another place the author gives the reasons for the employment of a trained nurse, and explains why the mother is not a good nurse in illness, but he fails to indicate what may best be done if the family cannot afford a trained nurse.

The book is directed too commonly at mothers of wealth to be general, democratic or universal enough in its appeal and advice.

The Mother and the Child. By Norman Barnesby, M.D., New York and London: Mitchell Kenerley, 1913, pp. 186. \$1.25. By mail of the Journal, \$1.32.

The use of the pronoun I in the preface gives a promise of a personal touch throughout the book which is entirely lacking. The most valuable portions of the book are the numerous quotations. "Koplish's sign" is obviously an error. Fifteen pages are devoted to Eugenics and ten pages to Medical Inspection of School Children. The last chapter is called Common Sense which virtually serves to defend medicine and medical men.

The general scope of the book is so limited that the average mother would secure very little information regarding such practical problems as constipation or diarrhea, breast-feeding, insorania, enuresis, disorders of dentition, masturbation, ophthalmia, vomiting or convulsions. And all this, despite the fact that the preface states, "My professional experience has shown me very plainly that there is great need for a book that will give simple but sufficient guidance to parents in all the duties and perplexities that concern their parenthood; a book to which they can turn when they are in doubt with regard to any ordinary problem affecting their children, in early babyhood or in later life." If this great need existed when the author wrote his book, the need still existed when the book was finished.

The School in the Home: Talks with Parents and Teachers on Intensive Child Training. By Adolf A. Berle. New York: Moffat, Yard Company, 1912, pp. 210. \$1.00. By mail of the Journal, \$1.12.

This book has for its basis the inadequacy of the home of the present day to meet the intellectual and educational needs of the children. Dr. Berle disclaims all pretensions as an educator, while he presents in the simplest form the results of educational experiments of the greatest importance. He is a scholar, a linguist, a master of style, and is on fire with enthusiasm for the possibilities of the home as an educational institution and with a consuming indignation at the waste of the most precious values in life when those possibilities are not realized. He therefore utters a clarion call to all parents to come again or at last into their own, and take over the development and conservation of their children's mental and intellectual capacity as they are beginning to conserve their children's physical powers. Dr. Berle describes the results of the methods he suggests when employed on considerable numbers of children of varying capacity, not supernormal in any case, from many kinds of homes and of varying ages. His suggestion is in essence not radical. It is merely that the child's mind should be regarded as seriously as his body, that his speech, the great implement of thought, should be trained as his bodily habits are developed and that

the food for his mind should be selected as carefully as the food for his digestive tract. While not radical in essence, the adoption of these suggestions would revolutionize most homes among the well-to-do. The author does not mention the place which the comic supplement plays in the mental diet of children in innumerable homes where a corresponding food would be treated as poison, but rather dwells upon the possibility lying before every parent, with the tools now available, of supplying his children with the food on which his mind can thrive and his spirit be enabled to enter on its rightful heritage. Dr. Berle calls on the home to come into its own.

New Zealand Society for the Health of Women and Children. An example of methods of Baby Saving work in small Towns and Rural Districts. U. S. Dept. of Labor, Childrens' Bureau, Infant Mortality Series, 1914. No. 2.

The United States Children's Bureau has recently pointed out what might be accomplished in a baby-saving campaign in small towns and rural districts by publishing an account of the New Zealand Society for the Health of Women and Children. This Society through its local organizations, 70 of which have been brought into existence, arranges for nurses' visits in homes, for educational columns in the country papers devoted to questions and answers on the care of babies, and other educational work, and has succeeded in reducing the death rate of infants from 8 per cent in 1900 to 4 per cent in 1911 and 1912. What has been done in New Zealand we should do next in America. This bulletin has many suggestions of methods for visiting, teaching, and extension work in Home Economics and should be studied by all Home Economics workers in these fields.

Industrial Education: its Problems, Methods and Dangers. By Albert H. Leake. Houghton Mifflin Company, 1913, pp. 205. \$1.25. By mail of the Journal, \$1.35.

This is the Hart, Schaffner and Marx prize essay for 1912. It is a very readable and suggestive book. It is divided into three parts as its title suggests.

In the first part are noted the numerous problems which have grown out of a large number of causes operative through the years in our transition from handicraft methods to factory methods, from extensive development to intensive development. Among the more important elements in the solution of the problems of industrial education the following are emphasized: putting the schools on a purely business basis; a reorganization of the elementary school curriculum giving it a direct industrial trend and making it correlate more closely with home interests; the provision of direct and definite industrial training from fourteen to sixteen for children who must become wage earners as soon as possible; the extension and vitalizing of evening industrial continuation schools for those in the industries over sixteen; and the development of vocational guidance.

The second part of the book, "Methods," deals largely with an elaboration of the problems set forth in the first part. Much attention is given to the vitalizing of the elementary school curriculum. The shortcomings of manual training are pointed out and more practical methods suggested. The aims, purposes, and results of typically good schools in this country and abroad are briefly noted and their vital elements emphasized. The revival of apprenticeship and its development in relation

ship and coöperation with industrial continuation schools brings about a most optimistic solution for the problem of the education of workers in many trades. The author advocates the early choice of vocation for the industrial workers and serious attention to their proper education and training from an earlier age than is now common for the skilled trades. The choice should be made before sixteen in the opinion of the author.

Under "Dangers," two rather common mistakes are discussed. The very expensive type of building and equipment frequently secured for industrial work may be avoided by study of shop needs and conditions in the industries and reproducing the best of these as largely as possible for school purposes. The other danger is that of attempting too closely to follow or adopt the methods and systems of foreign schools. The German schools are especially noted as meeting conditions quite unlike those of our own country in many respects.

The book is a wholesome discussion of the larger problems of industrial education, dwelling much more upon underlying principles than upon details of organization and development.

An appendix includes Resolutions adopted by the National Association of Manufacturers of United States of America on May 21, 1912, declaring themselves in favor of a thorough system of industrial education. Following this are a list of authors consulted and an index.

Practical Homemaking: A Text Book for Young Housekeepers. By Mabel Hyde Kittredge. New York: The Century Company, 1914, pp. 146. \$0.60. By mail of the Journal, \$0.65.

This book was written with a definite purpose in mind and it gives promise of fulfilling that purpose well. Miss Kittredge has for years been at the head of The Association of Practical Housekeeping Centers, and has planned this book to be used as a text book in such model homes as those included under her management. "This book is designed for girls in their first year of domestic science studies. It contains a complete year's course in homemaking, and is to be followed by a more advanced second year course." The author divides her subject broadly into hygiene, both personal and household, the care of the house and person, food and its preparation, with a short space devoted to the lighter touches of life such as table etiquette. The subject matter in all lessons is valuable, and for the most part presented clearly and simply. There might be a slight difference of opinion as to the advisability of the use of even the simplest technical terms in the lessons on food, and it would be wise for a teacher using this book to translate such terms in the course of her instruction.

The opening chapter, Household Hygiene and Furnishing is particularly good, and, to one who has spent a great deal of time in the homes of the average working man, Miss Kittredge's plea for simplicity in furnishing will be very grateful. The other chapters on household furnishing are also valuable, and ought to bring definite results in improvement of conditions in the homes of the girls using this book. The chapters on personal hygiene are equally important, although for an ordinary school course they might well be separated from the other lessons. In this connection, however, one must remember the very specialized character of the book. Under the conditions prevailing in these model homes it is quite possible to present a subject more informally than in the class-room.

The chapters on food and its preparation are more in outline than is necessary. The subject is treated with care, but it would seem possible to go more into detail in the matter of family diets. The chapter on Food Values is very good, and the only suggestions to be made are the one already noted about technical terms, and the one concerning more detail.

The preparation of food has to do with cocoa, tea and coffee, toasts, cereals, vegetables and eggs. The lack noted in this list being that of meat.

The author's intimate knowledge of living conditions in New York stands her in good stead, and she gives some valuable hints in the matter of tenement house laws, care of garbage, etc. There is also an appendix giving the equipment suitable for furnishing a model housekeeping flat or a home for five persons. This list is excellent and practical. In conclusion one would say that the book is a valuable addition to any library of Home Economics, and would make a good gift for any young girl or housekeeper.

Furnishing the Home of Good Taste. By Lucy Abbot Throop. New York: McBride, Nast and Company, 1912, pp. 220, illus. \$2.00. By mail of the Journal, \$2.16.

In this book the author gives a very brief outline of the development of style in furniture and furnishing from ancient times through the eighteenth century. In this résumé the author dwells longest on the Queen Anne and the Georgian periods, which is eminently proper, as those were the days when things were done which are closest in accord with our modern American spirit. The illustrations for the book are half tones from photographs and as a whole are well chosen. The book is in no way a guide to collectors but the author says "is meant to try to help a little about the modern side of the question," and so she gives a "general talk" on furnishings, then others on Georgian, French and Craftsman furnishings, country houses, the nursery, porch curtains and rugs, and concludes with a fairly complete bibliography on the subject of period styles and general house furnishings.

This is a splendid ending to the book, for its contents should arouse enough interest in the general reading public for them to demand more detailed information such as the books in this list will afford.

The Twentieth Century Book for the Progressive Baker, Confectioner, Ornamentor, and Ice Cream Maker. By Fritz L. Gienandt, Boston, pp. 200, pls. 57. \$6. By mail of Journal, \$6.15.

The author calls it "The most Up-to-Date and Practical Book of its Kind." He stated in his preface. "It is written solely for the purpose of elevating the Bakery Trade in this country to a higher standard, nothing that would be of use to the American Baker has been retained by myself, and a great many things that are of no value have been eliminated."

It gives directions and suggestions for simple or very elaborate fancy cooking, including the following: plain and puff paste, pies and pie fillings, tartlets, frosted squares, cream puffs and eclairs, butter cake with many variations, sponge and angel cake, cookies, macaroons, short cakes, meringues, kisses, waffles, pan cakes, sweetened breads, including such things as coffee cakes, tea rings, etc., honey cakes, plum puddings, custards, icings, jellies and jams, ice creams and sherbets, and soda fountain syrups.

The puff paste, fancy ornamented cakes and breads are excellently illustrated and there are several full page plates of ornamental frosting with a description for each plate. All recipes are in large enough proportion for commercial purposes.

Recipes and Menus for Fifty as Used in the School of Domestic Science of the Boston Young Women's Christian Association. By Frances L. Smith. Boston: Whitcomb & Barrows, 1913, pp. x + 246. \$1.50. By mail of the Journal, \$1.60.

Although this compilation of recipes was published primarily for the use of the author's students, it is designed to be of practical value to others concerned with the preparation of food for large numbers of persons. The amounts of food indicated were intended to suffice for women at light muscular work and, therefore, may need modification for persons of other dietary requirements.

Massachusetts Boys and Girls Home Economics Clubs: Primer of Instruction. By Laura Comstock and Ethel Nash. Amherst: Massachusetts Agricultural College, 1914, pp. 40.

The pamphlet contains rules and regulations for clubs, suggestions to parents and leaders; a list of helpful United States bulletins; simple recipes and directions for cooking; instruction in proper methods for preparing meals, canning, cleaning, sewing, and caring for children; and a sample report card to be filled out by each child. The totals are transferred to a monthly report card sent to the Agricultural College under whose supervision the clubs are conducted.

The Conquest of the Tropics. By Frederick Upham Adams. New York: Doubleday, Page and Company, 1914, pp. xii + 368, illus. \$2. By mail of the Journal, \$2.30.

This is a well printed and well illustrated book giving the history of the rise and present methods of the United States Fruit Company. It is especially the history of the cultivation of the banana in Central America. This fruit, a great curiosity in our northern markets even forty years ago, was then a small and uncertain crop in the West Indies and Central America, and only through northern enterprise has it become a regular crop raised over an extensive territory which has been rescued from the jungle by railroads and the enforcement of sanitary measures. If anything remains of the once current belief that the banana plucked from the tree is superior to what is offered in our markets it is demolished by Mr. Adams' statement that this fruit must be picked green and ripened artificially even for home consumption. In giving deserved credit to the enterprising men who developed this business Mr. Adams omits to mention the great names in science whose labors have made possible the control of tropical diseases, without which control business enterprise in those regions would have been impossible.

The Cost of Living. Philadelphia: American Academy Political and Social Science, 1913, pp. vi + 265. Paper, \$1.00; Cloth, \$1.50. By mail of the Journal, \$1.10 or \$1.60.

A collection of papers delivered before the American Academy of Political and Social Science. The four general topics considered were wage standards, family standards, public services and control, and concrete measures for reducing the cost of living.

Among the individual papers may be mentioned the following: Scientific Management in Home Making, by Mrs. F. A. Pattison; Utilization of the Family Income, by Mrs. Martha B. Bruère; Municipal Markets in their Relation to the Cost of Living, by C. C. Miller; Communal Benefits from the Public Control of Terminal Markets, by Mrs. E. Black; Relation of Cold Storage to the Food Supply and the Consumer, by Mary E. Pennington; and The Housekeeper and the Cost of Living, by Martha Van Rensselaer.

Reducing the Cost of Food Distribution. Philadelphia: American Academy Political and Social Science, 1913, pp. vi + 272. Paper, \$1.00; Cloth, \$1.50. By mail of the Journal, \$1.10 or \$1.70.

A second collection of papers delivered before the American Academy of Political and Social Science. These are grouped under six general topics: more efficient distribution and conservation of foodstuffs, lower costs through the middlemen, lower costs through municipal and direct marketing, lower costs through farm credits, lower costs through coöperation, and a constructive program for lower distribution costs.

BOOKS RECEIVED

Your Child To-day and To-morrow. By Sidonie Gruenberg. Philadelphia and London: J. B. Lippincott Company, 1913, pp. 234, pls. 12. \$1.25. By mail of the Journal, \$1.35.

The Young Mother's Handbook. By Marianna Wheeler. New York: Harper Brothers, 1914, pp. 165. \$1.00. By mail of the Journal, \$1.05.

The Young Folks Book of Etiquette. By Caroline S. Griffin. Chicago: A. Flanigan and Company, 1905, pp. 84. \$0.35. By mail of the Journal, \$0.40.

The Vocational Guidance of Youth. By Meyer Bloomfield. New York: Houghton, Mifflin Company, 1911, pp. 123. \$0.60. By mail of the Journal, \$0.65.

Vocational Training. Philadelphia: Associate Collegiate Alumnae, 1913, pp. 137. Paper, \$0.50. By mail of the Journal, \$0.55.

Ten Sex Talks to Girls. By I. D. Steinhardt, M.D. Philadelphia: J. B. Lippincott, 1914, pp. 193. \$1.00. By mail of the Journal, \$1.05.

Ten Sex Talks to Boys. By I. D. Steinhardt, M.D. Philadelphia: J. B. Lippincott, 1914, pp. 187. \$1.00. By mail of the Journal, \$1.10.

Women in Science. By H. J. Mogans. New York and London: D. Appleton and Company, 1913, pp. 452. \$2.50. By mail of the Journal, \$2.65.

Hair and Its Preservation. By Richard W. Müller. New York: William R. Jenkins Company, pp. 154. \$1.40. By mail of the Journal, \$1.50.

Textiles. By William H. Dooley. Boston: D. C. Heath and Company, pp. 320. \$1.25. By mail of the Journal \$1.36.

The Lighting Book. By F. Laurent Godinez. New York: McBride, Nast and Company, 1913, pp. 100. \$1.25. By mail of the Journal, \$1.35.

Making Built-in Furniture. By Abbot McClure. New York: McBride, Nast and Company, 1914, pp. 52. \$0.50. By mail of the Journal, \$0.55.

Dishes and Beverages of the Old South. By Martha McCulloch-Williams. New York: McBride, Nast and Company, 1913, pp. 317. \$1.25. By mail of the Journal, \$1.35.

Modern Industry. By Florence Kelley. New York: Longmans, Green and Company, 1914, pp. 147. \$1.00. By mail of the Journal, \$1.10.

Checking the Waste. By Mary Huston Gregory. Indianapolis: Bobbs-Merrill Company, 1911, pp. 318. \$1.25. By mail of the Journal, \$1.35.

NEWS FROM THE FIELD

Home Economics Association of Washington, D. C. On April 7 a meeting was held at which time the officers were elected for the ensuing year. After a short business meeting conducted by the former president, Miss Emma S. Jacobs, the speakers of the afternoon were announced.

Miss Eliza Lord of the Dolly Madison House, gave a most interesting talk on *The Relation of the Modern Woman to the Productive World*. She compared the position of woman and her economic value in the home, a few generations back and today and spoke also of the tendency of modern woman to lessen her responsibilities as she is no longer actually forced to assume them. Owing to changing conditions her place is not now that of a co-worker to obtain the material comforts of home, but rather the receiver of these things. The ability of women is being constantly recognized, however, by the great work done by them, as individuals, when carrying out scientific, or other lines of work.

The second speaker was Dr. Cora King, and her subject was *What the Higher Education of Woman Has Contributed to the Efficiency of the Home*. Comparisons were made between past and present methods, and the efficiency of them.

On June 2 another regular meeting of the Association was held, the subject for discussion being *reconstruction in the Homes of the Poor*. The following speakers told of their work in Washington: Miss Ufford of the Associated Charities, Miss Strong of the Instructive Visiting Nurse Society, and Miss Wheeler, Superintendent of Diet Kitchen.

The meeting then adjourned until October 6, at which meeting Miss Julia C. Lathrop is to speak.

New England Home Economics Association. The annual meeting was held at Simmons College, Saturday, May 16. The subjects of the morning were: *The Needs of the Immigrant Child*, Rev. Edward Cummings; *What the Schools are Doing for the Immigrant Child*, Miss Marie G. Lundberg.

Luncheon was served at the College at 1 p.m. In the afternoon there was a business meeting and an address on *What We Can Do and Are Going to Do*, by Mrs. Eva W. White, President.

The Home Economics Association of Philadelphia. A year ago the Home Economics Association of Philadelphia adopted a new constitution. This seemed advisable because of the greater possibilities for work in the various public activities relating to the home. At the annual meeting a synopsis of the year's work was given by the president. All felt that the time had been well spent.

The opening meeting took place at the Sixth Annual Conference of the Home and School League when the chairmen of the standing committees began the discussion which followed Dr. Abby L. Marlatt's address on *Humanics*. Dr. Marlatt's address was a wonderful stimulus to all. From the interest displayed by our members in the year's work we feel that it has been instrumental in awakening us to many problems of the home.

Each standing committee arranged at least one meeting during the year. Training in Citizenship, Control of Food Wastes, School Lunch Movement, and Art, the Power in our Environment were some of the subjects under discussion. Several sectional meetings were held between the regular monthly meetings.

At each meeting a member of the Current Topics Committee made a report of magazine articles, special books and bulletins of interest. They also called our attention to important meetings. Copies of the bibliography were printed and given to each member.

This year we plan to make an intensive study of Budget Making. The suggestion is that the Association as a whole study the budget in its relation to the home, the institution, and possibly the municipality, throwing emphasis on the sides most in line with our immediate interests. In connection with this plan we expect to organize two study classes. One will take up dietetics, with especial reference to the economic aspects. The other class will study the literature and work done on the family budgets. In this connection they will study expenditures for textiles.

Washington Home Economics Association. The State of Washington has a very flourishing Home Economics Section in connection with the Washington State Teachers' Association. Last October at the meeting in Spokane, the enthusiasm was so great that the section decided to have in addition to the regular fall meeting an annual spring meeting. The first session of the spring meeting was held at Pullman at the State College of Washington on April 17 and 18. The aim of that meeting was to discuss and formulate recommendations toward the standardization of Home Economics within the State of Washington. Another subject which we are working on is the probable introduction of the right kind of art training into the public schools of Washington. These subjects will both be discussed at the October meeting in Tacoma.

The officers of the section for the year are: President, Miss Agnes Houston Craig, head of the Department of Home Economics at the State College of Washington, and Secretary, Miss Bond, head of the Home Economics work at the Lewis and Clark High School, Spokane.

The session at Spokane was of unusual interest for the reason that the second vocational conference of the Northwest met at the State College at the same time and in coöperation with the Home Economics people emphasized vocational ideas along Home Economics lines.

Michigan Home Economics Association. The fourth annual meeting of this association was held in Detroit, May 29 and 30 in the Twentieth Century Club Building, where the members of the Detroit Home Economics Association were most cordial hostesses.

The program included addresses on dietetics, house decoration, design, etc., by Michigan educators and Home Economics workers from other states. Music also added to the pleasure of those in attendance.

The addresses were most inspiring, all of them leading toward the idea of greater recognition and hence greater fields of usefulness for our subject. The idea that our field is bounded only by life, and that it lies with us as workers in the field to widen one's own ideas to the greatest possibilities was constantly brought out.

The thoughts were summed up by Miss Lord of Pratt Institute who was the speaker for Saturday afternoon. She gave many suggestions for openings for help-

fulness aside from teaching. "Knowledge means responsibility in all life, not alone teaching power. We must teach right living in school, home, and in the commercial world."

The election of officers followed. The next meeting will be held at the time of the State Teachers' Association Meeting, the latter part of October, at Kalamazoo, Michigan.

Converse College, Spartanburg, S. C. The new department of Home Economics will have as its head Miss Catherine Mulligan, formerly Dean of Women and Professor of Home Economics at the University of Tennessee.

A part of the Science Building will be devoted to the Home Economics work. The work will be given for the first year under the two divisions of food and nutrition; shelter and household management. The domestic arts will be omitted for the present.

The Domestic Arts Course in the Meriden, Conn., High School. This course, which was introduced this year under Miss Alice B. Foote as supervisor, is designed to meet the need of the average adolescent girl who should learn values with reference to money, time, energy, health and happiness.

Sewing is taught for three years because this subject requires so much skill if it is to be accomplished successfully. Millinery is taught in the Sophomore year. The renovating of silk, velvet, ribbons, feathers, etc., is taken up in this connection as hats are made over for a New York Clothing Bureau. In these courses talks are given on the relation of color, line, and spacing, and also on health and morals as affected by clothes. The Consumers' League and the Woman's Exchange are also considered. Mathematics is used wherever possible in the calculation of materials needed, spacing for tucks, width of ruffle, plaited skirts, etc.

Cooking is taught in all four years, but is taken up from different standpoints. Simple cooking and serving with reference to the cost of breakfast, dinner, supper and lunch box are taken up in the Freshman year. Food principles, care of food, hygiene of materials, market conditions and cost problems are given especial attention.

The Sophomore course brings cooking into its relation to the household as a center of social living. Service in general is used as an expression of courtesy; household service as a form of education. Table manners and etiquette in entertaining and in the family circle are considered—the etiquette of those served and of those who serve. The girls give entertainments to other members of the school.

The Junior girls have invalid cookery in connection with ordinary first aids to the injured; also the care of those seriously ill and convalescing.

The Household Economics course for the Junior girls deals with the income and its division into percentages for food, clothing, shelter, operating expenses and higher life. The students select furniture for a home, and have lectures on arrangement, convenience, color combination, etc. Notes are given on income, rent, social problems related to dress, sweat shops, factory work, the close relation between industry and household, household and state, vocations, schools, servant problem, etc. Budgets are made out after the study of textiles has been taken up, and food is studied in relation to market conditions and income.

In the Senior class the care and feeding of children and the balancing of meals for all ages is taken up. In order to teach the economy of food and to help the cooking

courses to be self supporting, all the food cooked is transferred to the lunch room where it is sold, and the Domestic Science Department is paid for the cost of the materials. In this way the cooking courses help the school and the school gives a real motive for good results.

The merchants in town have given lectures on How to Buy, and have added a great deal to the success of the course.

University of Missouri. There has been held this summer, in connection with the Agricultural Extension Service, 48 one-week schools in Home Economics. These schools have been organized this year in twelve different counties. About fifteen young women are doing teaching, going out for periods varying from one to eight weeks in length. In general, they stay for only one week at each place. There are general lists of subjects which were sent out and from which the women of the local schools selected the topics which they wished to have treated. The most popular subjects were: bread-making, canning, cooking meats, cooking of vegetables, house sanitation, and feeding children. The attendance at each of these schools has averaged from 60 to 80 each day. Since each school lasts five to six days one can easily see how many women can be reached in this way.

This summer is the first that these schools have been held on such an extensive scale. Last summer twelve such schools were held in one county. The success of these seemed to warrant an extension this year. All of the teachers came to the University for a week of conference and preparation before starting out on their work. This work has been done under the direct supervision of Miss May C. McDonald, Extension Lecturer of the Department of Home Economics in coöperation with the Farm Management Department of the University of Missouri. The County Farm Advisers in the respective counties were responsible for the organization of the schools in the local communities.

School of Household Arts, University of Cincinnati. The School of Household Arts was established in 1908 under the auspices of the Cincinnati Kindergarten Association; on July 1, 1914, it became a part of the University of Cincinnati, under the direction of Ann Gilchrist Strong. The school aims to give scientific instruction in the fundamental principles and practices of activities growing out of private and institutional housekeeping, with a view to increasing the efficiency of those desiring to enter a vocation or engage in a business dependent upon a knowledge of such subjects as dietetics and food economics, textiles and clothing. The courses offered are fundamental to teaching, administration, and the business practice of household arts and sciences.

Students are admitted (a) as candidates for the B.S. degree, (b) as candidates for diploma, or (c) as special students.

Candidates for the B.S. degree in the School of Household Arts must be at least sixteen years of age, and will be admitted to the University on certificate from an accredited high school or preparatory school, or by examination. Students admitted on certificate must have completed satisfactorily an amount of preparatory study represented by sixteen units, including four units in household arts.

Commencement of the Garland School of Homemaking. That the training of girls for homemaking has a secure hold on the interests of a community is evidenced by the high character of the speakers on the subject who appear at the

commencement season. The girls of the graduating class at the Garland School of Homemaking, Boston, were addressed by Dr. Richard C. Cabot and Dr. M. J. Rosenau of the Harvard Medical School and Prof. Henry C. Metcalf of Tufts College.

Dr. Cabot dwelt on the qualities that fit a woman for comradeship and team work, especially on her power as a conservator of all that has been won by civilization and which we shall lose without the conserving hand.

Dr. Rosenau spoke on health as one of the essentials of the successful home; on prevention as the watch word of the hour and the responsibility of the home in this regard, the ignorance of the woman being the chief factor in infant mortality. He held that a grasp of the new responsibilities ennobles housework, makes homes better, cleaner and happier.

Professor Metcalf held that the world has so far advanced in its conquest over the problems of material wealth that the function of the homemaker in creating the right kind of home atmosphere is her most important rôle. He held, however, that the homemaker must more and more bear in mind the fact that home and society are a vital part each of the other, that she must use her influence in shaping the industrial world into which her children will enter. Our unscientific modes of consumption of food, clothes, books, tools, utensils, amusements, the speaker felt, reacted injuriously on production; that the art of home-spending is today in a backward state since the sciences most helpful, as physiology and psychology, are undeveloped and cannot aid as physics and chemistry do in production.

Home Economics at Commencement Time. In at least one high school the members of the Home Economics classes gave a good account of themselves on the commencement stage. At Sparks, Maryland, the members of the cooking class presented the Principles of Cooking for Invalids, and had attractive trays on exhibition.

It was thought that the class illustrated its work as effectively, and by the same methods as did the veterinary class in applying the tuberculin test to a cow in the presence of assembled farmers.

Thanksgiving Meeting of Home Economics Teachers. A meeting of high school Home Economics teachers is to be held in Chicago at Hyde Park High School, November 27 and 28, 1914. The Central Association of Science and Mathematics Teachers, a well-known organization of college and high school teachers, has recently established a section for us. Although detailed statements as to program cannot be given at this date, the following announcements can be definitely made.

The general subject of the meeting in all sections is Development of Applied Science in High School Teaching. Papers are to be presented in chemistry, physics and other subjects which will be of interest to Home Economics teachers.

A general meeting occurs on Friday morning, November 27; one of the features of this program is an address by Miss Martha Van Rensselaer of Cornell University on The Place of Home Economics in Secondary Education.

Friday afternoon occurs the round table for the Home Economics section. One of the subjects to be discussed is Housekeeping Courses; Miss Bernice Allen, of the School of Education, University of Chicago, and Miss Agnes Wilson, teacher of Chicago Stockyards Housekeeping Center, will lead in this discussion.

Saturday morning the subject, Mutual Relations to be Established between Home and School Laboratory, is to be presented by Mrs. Wm. S. Hefferan of Chicago, speaking for the interested mother; and School Credit for Home Work in Home Economics will be discussed by a teacher who has had successful experience in securing such work. A talk will be given by Miss Agnes Hanna, School of Education, University of Chicago, on Suggestions for Teaching Drafting of Dress Patterns in High School.

An excellent series of moving picture films to illustrate textile manufacturing processes, presented under the auspices of the Marshal Field firm, is promised for Saturday afternoon.

Other features of the section meetings will be: An exhibit of notebooks, to which all are cordially invited to contribute; an exhibit of text-books and other literature, charts and illustrative material; an exhibition of up-to-date household appliances. Also we are to discuss the question of the establishment of a journal for high school teachers of Home Economics, or, what is more probable, a department for them in connection with some already established journal.

Further announcements will appear in November and December numbers of School Science, the official organ of the Central Association of Science and Mathematics Teachers.

Will you not lend us your presence, your interest, your suggestions, and the support of your membership?

Committee on organization: Minna C. Denton, Ohio State University; Jenny H. Snow, Chicago Normal College; Bernice Allen, University of Chicago; Mildred Weigley, De Kalb Normal; Julia Tear, Hyde Park High School, Chicago; Mrs. Hubbell, Englewood High School, Chicago.

Household Science in Canada. At the closing exercises of the school year at Macdonald College, Miss Fisher, head of the School of Household Science, reported that the demand for graduates was rapidly increasing, especially in the hospitals of Canada.

Extension work through the formation of clubs among the housewives of the rural districts is under the leadership of Miss Campbell. In addition to the study of domestic science these clubs number among their activities the establishment of rest rooms in the villages and towns for the farmers' wives and daughters, and the improvement of rural schools. For the benefit of these clubs a traveling library of 140 volumes has been secured, while the school has also offered a short course every February for club members and others.

Ruralizing the Cities. Under this title the June number of the *Journal of Agriculture and Horticulture* published by the Department of Agriculture of the Province of Quebec, reports that Professor Shortt, Chairman of the Dominion Civil Service Commission, discussed the problem of the increasing urban population in Canada. Professor Shortt believes that the remedy lies in the taxation of the unearned increment, the money to be spent in suburban development. The improvement in transportation will soon make it possible to use large areas about cities of 15, 20 or even 50 miles radius for the homes of city workers, where each family would have an acre or two for the growing of garden produce and the production of milk and poultry. Under present conditions of living it is impossible

to grow strong virile people, so different are these conditions from those under which man developed for thousands of years in the open before the advent of cities.

This is much more true of the densely peopled cities of the United States. The movement to establish homes in the more distant suburbs should be encouraged by all agencies interested in the improvement of living conditions. But the achievement of satisfactory country homes for city people of average means is **not** an easy matter. We have our Garden Cities or the beginning of them in Forest Hills on Long Island and in Roland Park, Baltimore but they are for the well-to-do. England's garden cities which combine beauty, convenience, and cheapness have been built up near manufacturing centers.

Amherst Conference on Rural Community Planning. The several organizations and individuals in Massachusetts interested in Community Planning met for the Fifth Annual Conference July 28 to August 1, 1914.

Plans for conducting the Conference were much the same as in previous years. Section meetings of interest to certain groups were held each forenoon, round table discussions of topics of general interest were held each afternoon, and the evenings were given over to more formal lectures touching social and economic problems. The meetings were held in the open air as far as possible. Methods of teaching organized play and recreation were given each afternoon. Special conferences to take up topics not finished in regular meetings were arranged each day on request.

Teachers, clergymen, village improvement association officers, grange officers, boards of health, town officials, librarians and other men and women interested in problems of community development attended, took part in the discussions, and told what their communities had done.

The Conference was made possible by the following agencies coöperating in the preparation of the program: The Massachusetts Agricultural College, The Extension Service, Prof. William D. Hurd, Director, Amherst; The State Board of Education Dr. David Snedden, Commissioner, Boston; The Massachusetts State Grange Mrs. George S. Ladd, Lecturer, Sturbridge; The State Board of Health, Dr. Mark W. Richardson, Secretary, Boston; The Massachusetts Civic League, Mr. E. T. Hartman, Secretary, Boston; The Massachusetts Federation of Churches, Rev. E. T. Root, Secretary, Boston; The Free Public Library Commission, Mr. Charles Belden, Chairman, Boston; The New England Home Economics Association, Mrs. Eva W. White, President, Boston.

Graduate Work in Home Economics. A recent inquiry from the Amerika Institute at Berlin asks whether there are opportunities for graduate study in American institutions in the field of Home Economics. In reply, information was sent as to the degree granted by Chicago University in 1906 to Miss Edna D. Day for her thesis on Changes in Starch in the Cooking Process, and as to the degrees given in related scientific fields of physiological chemistry, food chemistry, bacteriology, economics and sociology and other related subjects in many American universities, as at Yale, Columbia, Chicago, Illinois, Wisconsin, and elsewhere. One may note in this connection the steady progress which graduate work in Home Economics is now making. Twenty colleges and universities now grant the degree of Master of Arts or Master of Science for special work in Home Economics. While

the University of Chicago is the only university granting the Doctorate in the department of Household Administration, as indicated above, this advanced degree may be taken in many institutions in scientific work which has a direct relation to the household. As a matter of record a statement may be given as to five doctorates conferred in the department of Physiological Chemistry at Yale University, to persons now university teachers in Home Economics, as follows:

Mary Davies Swartz Rose (Mrs. A. R. Rose), Ph.D. 1909. *Thesis*: Nutrition investigations on the carbohydrates of lichens, algae, and related substances.

Alice Frances Blood, Ph.D. 1910. *Thesis*: The proteolytic enzymes in certain plants.

Louise Stanley, Ph.D. 1911. *Thesis*: The occurrence of purine enzymes in the tissues of invertebrates and lower vertebrates.

Amy Louise Daniels, Ph.D. 1912. *Thesis*: Fat-transport and metabolism, studies with the aid of soluble dye.

Ruth Wheeler, Ph.D. 1913. *Thesis*: Feeding experiments with mice.

Vocational Guidance. To organize a movement to persuade young women and school girls, who now enter business, to study for home industries; to establish a system of visiting professions or trades; to offer these trades to the homes, and to ask the coöperation of those desiring such assistance is the plan offered by Mrs. Mary Shailer of New York, for meeting the needs of the young women of today.

Mrs. Shailer suggests a school where girls will be instructed in such visiting vocations as house management, decorating, cleaning, sewing, hair dressing, nursing, secretarial work, etc. High schools and other schools should provide similar training.

Arrangements would also be made for a registration bureau for bringing together the girls and the homes needing their assistance.

The American Association For the Study and Prevention of Infant Mortality. The Fifth Annual Meeting of the Association will be held in Boston, November 12-14. The program will include sessions arranged by the committees on nursing and social work, pediatrics, vital and social statistics, obstetrics, and public school education. The subjects to be discussed will include: Prenatal Care, The Need for Increased and Improved Maternity Hospital Service, Institutional Mortality, Continuation Schools of Home-Making.

The session on nursing and social work and the joint session on pediatrics and vital and social statistics will be held at the Harvard Medical School. All other sessions will be held at the Copley Plaza Hotel.

Special clinics will be held on the opening day of the meeting at the Harvard Medical School and elsewhere, the exact time and place to be announced later.

An exhibit will be held in connection with the meeting.

The Chairman of the Committee on Local Arrangements is Dr. Hugh Cabot, 87 Marlboro Street, Boston, Massachusetts.

Further information or circulars in regard to the work of the Association can be secured from the Executive Secretary, 1211 Cathedral Street, Baltimore, Maryland.

Notice. The Fourth International Congress on Home Education, scheduled to convene in the City of Philadelphia, under the auspices of the International Commission on Congresses on Home Education and Parent-Teacher Unions, September 22-29, 1914, has been temporarily postponed. Date will be determined by the

Central Committee, a meeting of which will be called by Dr. Martin G. Brumbaugh, President of the Congress, as soon as events warrant the same.

Mrs. Joseph R. Wilson, Chairman of Committee on the Convention of Safety, arranged as a part of the Fourth International Congress on Home Education, announces that the Convention of Safety will be held as scheduled although the Congress has been temporarily postponed. The Convention of Safety is under the auspices of the Home and School League of Philadelphia of which Mrs. Edwin C. Grice is President.

PROCEEDINGS OF THE SEVENTH ANNUAL MEETING OF THE AMERICAN HOME ECONOMICS ASSOCIATION, WESTERN RESERVE UNIVERSITY, CLEVELAND, OHIO, JUNE 30-JULY 3, 1914

The first session of the annual meeting was called together in the Florence Harkness Chapel (where all the general sessions were held) at 2 p.m. on Tuesday, June 30, by the President, Miss Sarah Louise Arnold. Miss Arnold greeted the members of the Association, briefly outlined the broader purposes to be served by the program, and urged all those present to interest themselves not only in those parts of the program that directly concerned their specific work, but also in those parts that seemed to them unrelated.

Miss Mary E. Parker, head of the Department of Household Administration, then welcomed the Association briefly, outlining the history of the organization of the department, new this year.

Dr. Charles F. Thwing, president of Western Reserve University, endorsed Miss Parker's welcome.

Dr. Harris R. Cooley, Director of Public Welfare for Cleveland, offered the city's welcome. Dr. Cooley gave a spirited and inspiring account of what the "City of Good Will" is doing for its poor, its crippled, its sick, physically, mentally and morally.

Miss Arnold then announced the general plan of the meeting, that only two general sessions were arranged each day, and that in the free time of the day special conferences on specific interests would be held, at the call of the chairmen. She appointed the following chairmen:

Housekeeper's Conference, Dr. B. R. Andrews; Research Conference, Miss Agnes Hunt; Conference of Heads of Departments, Miss Katherine McKay; Domestic Art Conference, Mrs. Bessie Birdsall; Conference on Extension Work, Mrs. Mary P. VanZile; Elementary Schools Conference on Cookery, Miss Cora Winchell. (Later there were organized conferences on Agricultural College Work and one for editors of Home Economics departments of farm papers.)

Committee reports were then presented as follows:

Committee on Housekeepers' Section: This committee has been in existence so short a time that it has been able to accomplish little more than to assist in preparing the program for the Housekeepers' Section of this meeting, and, to begin the work of bringing the JOURNAL and the homemaker in closer touch. This latter aim it seems to us might well be a definite part of the plan for next year's work, since each can be most helpful to the other. The housewife can supply criticism and suggestions, which develop from her practical knowledge of varied conditions and situations and

can give the results of careful experiments in the many fields of her labor. The JOURNAL might concentrate for a time on the needs of the homemaker, and give to her the results of scientific experiments in terms with which she is familiar. The opportunity for technical training in the household arts is of so recent a date that only a small percentage of our home makers are familiar with the scientific terms. This committee has worked and might well continue to work for the "Ellen H. Richards Memorial Fund." Since Mrs. Richards has done so much for the upbuilding of the home, special emphasis should be placed on this phase of our work, not only as a token of gratitude, but as a tribute to a pioneer whose inspiration is felt in every civilized country. In view of the fact that this is the youngest department of the Association, we ask the coöperation of all the other departments in order to insure the greatest possible success.

MRS. SCHUYLER D. HERRON, *Chairman.*

Editorial Board of the Journal: With each issue of the JOURNAL we have presented the best we have been able to bring together for the help of the teacher of regular school courses, who must always be the first care of the JOURNAL, and also for the advanced or extension courses for housekeepers to whom we have given additional attention this past year. Material of this latter character has appeared in every number of the JOURNAL since it started, but in February we began to put it together in a separate section, and to treat a larger number of topics popularly and briefly. This we have called the Housekeepers' Department, an experiment to be discontinued at any time if it should seem best to do so.

We do not consider it a success yet and we have earnestly sought, as many of you have had reason to know, for criticism that may help us to improve it. We have tried to follow one rule, that is, to group different instances under a general principle. We have also tried to give continuous information in each issue on some one topic of present interest, as Coöperative Buying. The topic that we hope to concentrate on next year is a comparison of the cost of doing work in and out of the house. Whether as a result of this department we are to get more subscriptions from housekeepers it is too early to state; three issues is only a beginning. But we have been assured by many teachers that they make use of this new department in their classes. This is unexpected good news.

But we are not deceived by any of the good words of encouragement. We know that we have entered on the field of constructive journalism, which requires a training that your editors have not received. It was on this account that we called for a fund of \$500 that should enable us to secure such help. This fund was generously subscribed in one day at the Cornell meeting last summer as many of you remember, thus showing that you wanted the experiment of the Housekeepers' Department tried. We have been trying to find in \$25 and \$50 lots the help that will give to this department what one of our correspondents says it most needs—"punch."

As to the general conduct of the JOURNAL we know that the subject is growing too big for us. The specialization that is going on in Home Economics is enormous. We try in vain to keep track of new courses, of readjustment of values in old ones and the needs of localities. We look at the splendid paid staff of certain other journals with envy, for specialism is the new note in journalism as elsewhere. We have also no money to pay contributors, but we have on the other hand an asset of great value in the interest of the Association. I cannot stop to acknowledge our

indebtedness to many who have helped us, but I mean to say once a year how much we owe to Mrs. Rose for that splendid bibliography which she sends for every issue on time to the day. I sometimes think it is the best thing the JOURNAL offers. A month ago we began to send out a little circular to teachers and others asking for the promise of very definite assistance in reporting news and in suggestion of subjects and their treatment. The response has been most encouraging. We are going to get out calendars with marked dates—an automatic jog of your memory. If you want to help us, please apply for one. As a Journal Board we have been stuffing both hands into a leak in the pipe, a devoted but stupid method. Now we are calling for the engineer corps.

MARY HINMAN ABEL, *Chairman.*

Committee on Ellen H. Richards Memorial Fund (including the report of the Committee on Home Economics Day): The Fund now amounts to \$2737.05 in cash with publications on hand from the sale of which \$400 will be realized (a net value of \$3137.50). During the past year \$366.85 have been subscribed to the Fund and \$172.50 have been transferred to it from the life memberships of the Association which will hereafter be funded as part of the Richards Memorial—an increase of \$539.35. The Richards Memorial faces a crisis. If the Association membership will unite in centering all efforts of the organization upon completing the project, success can be won. The committee on the Funds recommends that the Council and Executive Committee adopt as their leading aim for 1914-1915 the raising of \$25,000 for the Fund by July 1, 1915, and that they assume active leadership in place of the small committee now in charge of the canvass.

Work of the year 1913-1914. During the past year the Fund committee has taken the following steps:

1. Reprinted the statement regarding the purpose of the Fund, and the plea for funds from last year's committee report—1800 copies.
2. Drew up a program for observing Richards Day, 1913, which was printed as the September, 1913, *Bulletin* of the Association, 1800 copies of which were reprinted and sent on November 1 (with 1 above) to colleges, normal schools, high schools and women's clubs which have Home Economics departments.
3. In December persons were asked to serve as state chairmen in all but a few states and were furnished a list of high schools in their states which they were asked to canvass with a personal letter.
4. On May 2, a conference was held in New York with members of the Executive Committee of the Association regarding methods of raising money.
5. In May a circular letter was sent to 1345 high schools asking that they raise a contribution if possible this spring, and that they plan to have an observance of Richards-Rumford Day in 1914-1915, in joint honor of Mrs. Richards and Count Rumford (1753-1814).
6. In January, 1914, the second edition of 1000 copies of the "Syllabus of Home Economics" was published by the committee and the receipts from the Syllabus have helped meet the expenses of the canvass.

7. As publication No. 2 of the Richards Memorial Fund, the committee expects soon to issue an edition of the Report of the Household Aid Company, the experiment in trained domestic service by the hour, the report of which was written by Mrs. Richards. Prof. Lucy Salmon of Vassar College will write the introduction to the Memorial Fund edition.

DEPARTMENT

OF

HOUSEHOLD SCIENCE

8. The Fund Committee has projected a plan for raising money for the Fund by securing subscriptions from food manufacturers to compile and issue two studies: A Sanitary Code for persons who handle foods, in factories, kitchens, dining-rooms, etc., and Balanced Menus for various costs and conditions. It is believed that funds may be secured for such studies, and that their sale would bring considerable accessions to the permanent fund of the Richards Memorial.

9. The annexed financial report is for the canvass from its beginning under Mrs. Barrett in 1911 to date June 30, 1914. There is a net sum of \$2737.05 cash in hand plus publications for sale with an inventory value of \$400—a total of \$3137.05. The expenses have been \$419.82 for the preliminary canvass under Mrs. Barrett and \$359.97 for the present canvass from September 1912 to date—a total of \$779.79 expenses. In cash \$3516.84 has been received to date at an expense of \$779.79—a cost of about 22 per cent for collections; or, including unsold publications, a total of \$3916.84 has been received at a cost of 19 per cent for collection.

During the past year contributions of \$366.85 came almost entirely from schools which in connection with Richards Day observance raised from \$10 to \$40 each. Twenty-five such subscriptions were received, an average of nearly \$15 from a school.

Financial Report of Committee on Canvass for Ellen Richards Home Economics Memorial Fund, 1911, to June 30, 1914.

1. Preliminary canvass 1911 to September 20, 1912, in charge of Mrs. Barrett

Receipts.....	\$728.52
Expenditures.....	<u>419.82</u>

Net Receipts..... \$308.70

2. Canvass September 20, 1912, to June 30, 1914, in charge of B. R. Andrews

Receipts.....	\$2582.88
Expenses.....	<u>359.97</u>

Net receipts..... 222.91

Total Receipts in general fund..... \$2531.61

3. By Richards Calendars, balance..... 13.55

4. By "Syllabus of Home Economics" balance to date..... 19.39

5. By life memberships in American Home Economics Association,
and accrued interest thereon, transferred to Memorial Fund
by vote of Executive Committee..... 172.50

Total amount Richards Memorial Fund, cash..... \$2737.05

Inventory value of publications for sale..... 400.00

\$3137.05

Proposed plans of the canvass for next year. It is recommended that the council of the Association assume management of the canvass for the ensuing year as the one Association enterprise of highest importance. That the Richards Fund be declared the Endowment Fund and the sole depository of permanent interest-bearing funds of the Association.

The purpose of the Fund to be stated explicitly in terms of the Association, for example, the support of an executive secretary of the Association; or a fund for research and publication. This more definite agreement on aims and purposes is essential to the raising of public subscriptions for the Richards Fund. That a definite and reasonable, immediate aim be set—for example, the raising of \$25,000 by July 1, 1915. That subscriptions from \$10 to \$100 in form of continuing subscription of from \$2 to \$20 a year for five years be made by each of us present at this convention and sought from the 1000 Association members.

That high school and college contributions and women's clubs' subscriptions be sought on Richards-Rumford Day, 1914-1915, through a program planned for universal observance in all institutions. That general subscriptions from persons of means be sought. That subscriptions from food manufacturers be sought for the publication of sanitary and food studies.

That local committees be formed in all branch associations and community contributions be sought in whatever ways are possible. Finally, that the Association secure the services of an executive secretary to devote full time to the raising of this Endowment Fund of the Association and such other duties as the Association may direct.

BENJAMIN R. ANDREWS, *Chairman.*

Committee on the Graduate School of Home Economics: The projected Graduate School of Home Economics scheduled for July, 1914, will not be held for the following reasons:

1. The annual meeting of the American Home Economics Association affords an opportunity for reports, lectures and conferences on the various subjects which are of especial interest to teachers and students of Home Economics. Because of this meeting there is less need for a Graduate School of Home Economics this year.

2. Many state normal schools, universities and chautauquas are offering courses in the various subjects grouped under Home Economics. These are suited to the needs of both elementary and high school teachers. In several institutions advanced work is being offered. Therefore, unless the Graduate School could be of distinctly graduate grade, which necessitated the services of specialists in the various subjects, the Graduate School would not be a success. The financial situation did not admit of a program of this character.

3. The American Home Economics Association has no funds available for the support of a Graduate School of Home Economics; the major part of the expenses of the School must be defrayed by the institution whose invitation the Graduate School accepts. When the program of the Graduate School of Agriculture is of interest to students of Home Economics, as has been the case in the past, the sum of \$500 has enabled us to supplement their expensive program with enough distinctly Home Economics work to offer a school of considerable merit. But this year the Committee on Arrangements for the Graduate School of Agriculture has planned a program which only very remotely interests us, therefore, we would have had to arrange for our entire program. A much larger sum was necessary. We did not feel justified in asking our host to appropriate this larger sum, since the conditions were not known before the invitation was sent; in fact, it was not known that any appropriation was expected.

4. The geographical situation of Columbia, Mo., does not make it a desirable place in which to hold a summer school. More money would be necessary in order to

persuade lecturers to come to such a warm place in July, and their traveling expenses would be greater because Columbia is not on the natural route to any summer resort they might be seeking. Furthermore, our program would have had to be unusually attractive, in order to attract people from the North, West and East, and even those in the South would prefer to spend six weeks in the middle of the summer in a cooler place.

Recommendations of the Committee on the Arrangements for the Graduate School of Home Economics. It is the opinion of the Committee that under the present organization of instruction in the universities there is no special advantage in graduate schools of Home Economics as they have been in the past. These schools were started when there was being given little or no work for the advanced student. The American Home Economics Association was holding its annual meeting in December. The Graduate School offered an opportunity for those interested in special lines to get together and discuss problems of mutual interest. Since the time of the annual meeting of the Association has been changed, such conferences can very well be held in connection with this meeting. At present a real graduate school, in which courses dealing with the more advanced phases of our subject could be offered, would attract too few people and continue too short a period. The various institutions are filling any other need.

The affiliation of Home Economics with Agriculture has no fundamental justification. There is no more natural affiliation of Home Economics with agriculture than with medicine or sanitary engineering or civics, etc. If graduate schools of Home Economics are to continue they should be held in those places which will attract the larger number, regardless of the place of meeting of the Graduate School of Agriculture, for it is only occasionally that the program of the two schools can be made to fit together.

There is no need of offering courses in a graduate school, for academic credit. Those desiring courses for credit might better take six weeks of work in one of the many institutions offering courses in Home Economics. If one institution would undertake to give the sort of work that a graduate school should give, it would attract a considerable number of advanced students, too few, however to support a graduate school.

AMY L. DANIELS, *Chairman.*

Committee on Legislation: The past year has shown decided progress in the kind and amount of legislation affecting the home and education in the household arts. Most notable is the passage of the federal bill known as the Smith-Lever, but a number of the states have passed bills of moment. Several states have passed bills making the teaching of the household arts compulsory in the schools of the state. An interesting piece of legislation has been brought to a successful issue in Connecticut in which the Consumers' League of that state was greatly interested. Miss Mary Crowell Welles, general secretary of the Consumers' League of Connecticut makes the following report:

"Two educational bills were introduced in which the League was directly interested:

"One, to permit local boards of education to establish *vocational guidance* as a part of the educational system of a town, was drawn up by one of the League's representatives on the vocational guidance committee of Hartford. All of the five organizations of Hartford which are coöperating in prosecuting this work in Hartford were represented at the hearing. The League members in the town of Greenwich,

who have also become interested in this work, sent up a representative to express their desire that the bill pass. It was reported favorably and passed without opposition.

"One of the most important measures enacted during the session was called *the general trade school bill*. It provides that either the State Board of Education or local school committees may establish vocational schools or continuation school courses. If the state establishes such schools or courses, it must pay the running expenses, provided the town furnishes building and equipment; if the town establishes such school or courses, the state must pay one-half of the running expenses. The expenses chargeable to the state are limited, however, to one hundred and twenty-five thousand dollars a year. This bill was introduced by the State Board of Education. As originally drawn, it contained an excellent provision that was afterward eliminated: namely, that children up to the age of sixteen should be compelled to attend such day schools or part-time courses, where organized, if not attending school elsewhere. Had this provision not been eliminated, Connecticut would have stood in the front rank among the states in educational legislation, and it is to be hoped that in 1915 this compulsory feature may be inserted in the statute.

"Some features in the bill were suggested to the Board by an appeal made to it by the Consumers' League that it would provide greater opportunities for girls in the way of vocational training, by offering courses in housework for domestic servants and boarding-house keepers and furnishing instruction in the artistic trades and salesmanship. The League assisted in securing a favorable report of the bill by summoning to the hearings representatives from eight state organizations of women. About seventy-five women appeared to advocate the passage of the bill, representing over a dozen towns in the state.

"Never in the history of our General Assembly has such advance been made in labor legislation in a single session. The state seems to have become awake to the progress around it and likely to take the lead in such work instead of lagging behind, as has been its reputation. Mary Cromwell Welles."

It should be recalled that the Committee of the American Home Economics Association on Legislation sent a request to the members of the Association, asking them to support the Federal Smith-Lever bill through their senators and representatives. This request evoked an interesting correspondence, the chairman and members of the committee receiving expressions of strong approval and disapproval of the bill. This would probably be the case always with any Federal bill, which seems to suggest that the Association would do well to take part with other organizations in promoting state legislation. The following details are of interest:

Mrs. Mary H. Abel and Dr. Benjamin Andrews, representing the Association, called on members of the Committees on Agriculture in the United States Senate and House of Representatives in 1913 in support of the Smith-Lever bill for Federal aid for extension teaching in Home Economics and agriculture; and in April, 1914, before the same committees in support of an increased appropriation for the Nutrition Investigations of the United States Department of Agriculture, and the widening of its work to include textiles and household management.

Of the points urged in last year's report:¹

1. The Joint Resolution No. 5, for an Industrial Education Commission was adopted by Congress, the commission was appointed, and its report, it is understood,

¹ See JOURNAL OF HOME ECONOMICS, 5, 1913, no. 4, pp. 362-363.

will urge Federal aid for a national system of continuation schools in which household arts will have a place.

2. The Smith-Lever bill, for aid to extension teaching in household education and agriculture was passed and signed by President Wilson, May 8, 1914. Facts regarding it are given in the *Weekly News Letter* of the United States Department of Agriculture, May 27, 1914.

3. The Department of Agriculture Appropriation bill for 1914 provided for an appropriation of approximately \$26,000 instead of \$16,000 for the Nutrition Investigations, and widened its scope to include textiles and household management.

4. No action has been taken on the Smoot bill for aid to research in Home Economics in state agricultural experiment stations. The Association may well urge again the fundamental importance of such research.

In state legislation, the committee again urges that local Home Economics associations study the legislation of their own states, and secure laws providing full recognition and support for Home Economics teaching. A forthcoming report of the United States Bureau of Education, it is understood, will give a summary of legislation in this matter for the various states; when available, it should be studied and acted upon. As mentioned in last year's report some of the important issues in state legislation are as follows:

1. State aid for vocational education including household arts. New Jersey, Pennsylvania and Indiana have during the past year adopted such aid, and the matter is pending in other states.

2. State supervision of Home Economics in the schools. Wisconsin has this year appointed a supervisor on the staff of the state superintendent of public instruction; Illinois has had for several years a high school visitor in Home Economics going out from the state university; Louisiana has a state supervisor attached to the extension staff of the university; Massachusetts has a supervisor of continuation classes in household arts; and several states as New York, Arizona, Pennsylvania, Indiana and others are giving state direction in household arts. Every state needs a visiting supervisor in household arts, at least during the formative years.

3. A requirement that household arts must be taught in the schools; Indiana and Iowa, have this year adopted this standard, previously required in Oklahoma and one or two other states.

Respectfully submitted,

HELEN KINNE, *Chairman*.

Report of the Committee on State Supervisors: This investigation, as yet incomplete, indicates that much good has resulted wherever state supervision of the teaching of Home Economics has been introduced. Massachusetts, Wisconsin, Illinois, and Louisiana have state supervision to some degree; in Massachusetts for state-aided vocational schools, in Wisconsin for all public schools. In Illinois and Louisiana the State Universities send inspectors to the accredited high schools to pass on their courses in Home Economics for college entrance. It is reported that New York State is about to appoint a state supervisor.

Formerly the chief concern was to get Home Economics into the school curriculum. Now it is widely introduced, its popularity is assured by the interest of school patrons, extension teachers and lecturers in farmers' institutes and women's clubs, its support is guaranteed by generous contributions of private, local, state, and national funds. Home Economics is being taught, but how? Are we getting

the best possible return for this investment in special and expensive equipment and for the outlay of time and human energy by pupils and teachers?

The situation in any state is likely to be similar to that in New York which is described by Mr. Arthur Dean: "The rapidly increasing demand for teachers of Home Economics so far exceeds the possibility of supplying trained women for such positions that many have been drawn into this line of service who are inadequately and hastily prepared. An experienced advisor or counselor within easy reach of the young or inexperienced teacher is the least that should be given to strengthen, supplement, and guide her. The real remedy is in the Normal schools in their selection of those suited to this work, in their encouragement of married women who have met real responsibilities in life, to enter this field, and in their giving during the training period viewpoints beyond mere materials and methods."

Supervision is considered essential in the larger cities where higher salaries and rigid requirements combine to attract the best qualified teachers. Surely it is equally essential in smaller cities and rural districts. For this work we want as supervisors the strongest women in the Home Economics field.

To the supervisors in Massachusetts, Wisconsin, Illinois, and Louisiana, were sent these questions:

1. What has been accomplished up to the present time through state supervision of the teaching of House Economics?
2. What may yet be accomplished?
3. What method of state supervision seems most effective?
4. What percentage of teachers seem so efficient because of superior technical knowledge and skill, method of teaching, and general experience as to need no supervision?
5. To what extent have living conditions in the community been improved through Home Economics in the school?

The replies show that wherever introduced, supervision has resulted in improved teaching, courses of study raised to a higher standard, and more economic and effective use of state money.

In Massachusetts, Mrs. Eva W. White, who has supervised instruction in the state-aided vocational schools for about two years, says: "Supervision should not drive communities to adopting particular methods or courses of study, but should stimulate the local community to assume full responsibility for initiative in the development of their schools, with state supervision to justify it, state subsidy for some needy communities is allowable because of the general good to the life of the state." Mrs. White keeps in constant touch with communities through personal visits, correspondence, and speaking at teachers' meetings. Home project work is started and extension courses planned for Massachusetts.

The State of Wisconsin appointed Miss Emma Conley, Supervisor of Domestic Science in 1913. She has standardized the work and it counts toward graduation, as the equivalent of other subjects. Miss Conley finds that the majority of teachers of our subject are young, inexperienced, and lacking in serious purpose. They wish to improve and profit by the advice of the supervisor but remain in the service too short a time to become efficient. Probably, only 10 per cent are really efficient.

The situation is serious in Iowa, Ohio, and other states which are requiring that household subjects be taught in every 7th and 8th grade. Funds are lacking for special teachers and equipment. As one Ohio superintendent said, they are "hard put to know what to do." Generally they decide to have a grade teacher take a six

weeks' course in a summer school and do the best she can on that brief training under conditions which would be difficult for a thoroughly trained and experienced teacher. Here is most obvious need of a supervisor's help. The Association should recommend the appointment of able supervisors in a resolution which could be sent to state superintendents and boards of education.

If this committee is to continue its investigation I should propose making a survey of the whole country, state by state, county by county, in order to get definite information concerning the teaching of Home Economics. We should know how many schools are offering courses, what their equipment is, their course of study, what training and experience their teachers have had, and to what extent the teaching of the subject is improving life in the community. From this might be deduced what improvements are possible in the selection and training of teachers and in improving the work of those already in the field.

ALICE L. THOMAS, *Chairman.*

Committee on Nomenclature: There seems to be an opinion in the minds of some people that when the Syllabus was made, the Committee on Nomenclature had ended its labors. But, the committee really felt that it had only begun. It had set on paper some clear definitions and sent them out to the world hoping to get suggestions and criticism. We have had a meeting in Chicago within the last ten days, and have a plan under way to revise these definitions so as to keep them up with the discoveries that have been made, and we want more help. We have one satisfactory report to make in the fact that the first thousand copies of the Syllabus were sold, and therefore a little money for the Richards Memorial Fund has been made in that way. I do not know how the rest of the teachers feel, but it was a great satisfaction to me to be able to say to my senior class: "Please buy the Syllabus so that next September when you begin work you will not have to send a special delivery letter to the University of Illinois inquiring, 'Where was that pamphlet, that has definitions in it, and what was the name of it?'" I said: "Buy it right here and now and take it home with you," and I felt justified in doing so because I knew that these questions would come, and I think that the definitions are as good as they would find anywhere. I think Dr. Langworthy reported that there were some definite expressions of opinion at Lake Placid as to ways in which the work of the committee could be improved. I will ask him to say what was really done at Lake Placid.

Dr. Langworthy.—There was a definite suggestion made at the Institution Economics Section at Lake Placid, which was that in naming courses of instruction in schools and colleges, we follow the terminology of the Syllabus in so far as possible. You may recall the fact that some institutions look askance at courses in cooking, in laundry, in sewing, in millinery, and so on, thinking, unjustly of course, that these subjects are not worthy of dignified study. They forget that it is the method by which you do work and not the subject you study which dignifies it, but be that as it may, we believe that courses would have a better standing if these terms were avoided, and would also give a clearer idea of the work. For instance, Clothing—Care and Renewal—would cover not only the laundry work, but the principles of chemistry back of it which dignify it, and raise it from mere drudgery, and would give it a better place in many colleges than it has under its present designation. The same thing applies to Food—Care and Preparation—which would cover cookery, and so it would go through other phases of Home Economics work. The Syllabus is very rich in suggestions for terminology. As Miss Bevier has said, the

first edition of 1000 copies has been sold out, and the second edition with some very minor changes, has appeared. It is going very rapidly, and we hope will make still more money for the Richards Fund, and that the Committee may have help in further revision. Some is promised for the sociological and hygienic section and we hope that you will all work on bibliography so that eventually each section of the Syllabus may have a selected list of reference books or articles, so that we will have a bibliography of Home Economics which surpasses in completeness and in accuracy any existing work on the subject.

ISABEL BEVIER, *Chairman.*

The Committees on Exhibits, on Score Cards in Home Economics and on Textiles did not report.

The Nominating Committee through Miss Anna Barrows presented a tentative report, but the final report was not presented until Thursday morning. The reports of the Committees on Resolutions and on Audit were presented Friday morning, as were also the reports of the Secretary and the Treasurer. There was some discussion on the question of state supervision.

Second Session, 8 p.m. Tuesday, June 30

Miss Sarah Louise Arnold, president, presiding. The session opened with a brief but delightful organ recital by Prof. Charles E. Clemens, the University organist. Miss Arnold then introduced Dr. Charles F. Thwing, president of Western Reserve University, whose address was entitled "Shall the Family be Preserved?" At the close of this scholarly address, President Thwing received the members of the Association and their friends at an informal reception in Guilford Hall.

Third Session, 9.30 a.m., Wednesday, July 1

Mrs. Mary Hinman Abel, editor of the *JOURNAL OF HOME ECONOMICS*, presiding. Mrs. Abel made a brief address on the importance of this special session for housekeepers, and then introduced Miss Emma A. Winslow, Teachers College, Columbia University, who presented a paper on "The Consulting Housekeeper." She was followed by Mrs. Henry M. Dunlap, ex-president of the Illinois State Farmers' Institutes, who read a paper on "The Visiting Housekeeper in Rural Districts." The next topic of "Buying for the Household" was presented by Dr. Benjamin R. Andrews, Teachers College, Columbia University. A paper by Miss Helen Louise Johnson was to have completed the morning's program, but it was postponed to the evening session because the Association had the delightful surprise of an address from the Hon. Philander P. Claxton, U. S. Commissioner of Education. Dr. Claxton came in response to an urgent telegraphic invitation, to show his personal and official interest in the work of the Association. He spoke at some length of its importance and of its relations to the whole field of education. He made a strong plea for greater definiteness in the teaching of Home Economics and for great increase in extension work. The morning session was then adjourned.

The interval between this and the afternoon sessions of conferences was used by most of the visiting members in accepting the cordial invitation of the National Lamp Works to visit the cafeteria at their plant at Nela Park, and see their arrangements for caring for employees. The Company provided automobiles for the trip and made the visit a pleasant one in every way. The cafeteria, both in equipment

and in prices, called forth the admiration of all who attended. At 4 o'clock automobiles lent by citizens of Cleveland, were at the University to take all who cared to go on a drive around the beautiful lakeside city.

Fourth Session, 8 p.m., Wednesday, July 1

Dr. J. E. Cutler, Professor of Sociology, Western Reserve University, presiding. The subject for the evening was Community Housekeeping, and Dr. Cutler presented the subject in a particularly clear and pungently-worded paper. He then introduced Miss Mildred Chadsey, Chief Inspector, Department of Public Welfare, Division of Health, Cleveland. Miss Chadsey talked rather than read a most interesting paper on "Municipal Housekeeping." This was to have been followed by a paper on "The Tenement Housekeeper" by Miss Frances Stern of Boston, but Miss Stern was unable to come, and place was therefore given to Miss Helen Louise Johnson's clear and practical paper on "Teaching Children to Spend."

Fifth Session, 9.30 a.m., Thursday, July 2

Miss Isabel Ely Lord, Secretary, presiding. Miss Lord introduced Miss Annette J. Warner, Cornell University, who read a paper on "Art in the Home," and Miss Laura A. Cauble, of the Bureau of Food Supplies, Association for the Improvement of the Condition of the Poor, New York City, who read a paper on "Educational Effort in Municipal Food Control." There was a brief discussion on Miss Cauble's paper, but it was necessary to cut it short in order to proceed to the business session. It was also necessary to omit the brief accounts from different institutions teaching household science and arts, planned as a part of this program. Miss Lord therefore turned the meeting over to Miss Arnold, who called for the final report of the Nominating Committee, which was as follows:

For President, Miss Martha Van Rensselaer, Cornell University. For Vice-Presidents, Miss Abby L. Marlatt, University of Wisconsin; Miss Marion Talbot, University of Chicago; Dr. Benj. R. Andrews, Teachers College, Columbia University. For Secretary, Miss Anna Barrows, Teachers College, Columbia University. For Treasurer, Dr. C. F. Langworthy, U. S. Department of Agriculture. For members of the Council, Miss Sarah Louise Arnold, Simmons College; Miss Isabel Ely Lord, Pratt Institute; Miss Josephine T. Berry, University of Minnesota; Miss Catherine A. Mulligan, Converse College, Spartanburg, S. C.; Miss Helen Louise Johnson, Watertown, N. Y.

Miss Arnold then called for the Report of the Committee on the Revision of the Constitution, as finally revised by the Council. The Report took the form of a Constitution recommended for adoption. Prof. William Morse Cole, chairman of the committee, was unable to be present, and Miss Arnold asked Dr. B. R. Andrews to offer any necessary explanations. The Report was read paragraph by paragraph by the Secretary and was voted as read.¹

Dr. Benjamin R. Andrews then announced the decision of the Council to raise \$25,000 of the endowment fund (Richards Memorial) by the next annual meeting, and presented the necessity of a paid Executive Secretary, who should for a year give full time to the work of the Association, especially to the raising of the endowment fund. He called for pledges from members present to give or raise \$400 toward

¹ The revised constitution is printed in full in the September *Bulletin*.

the \$3000 deemed necessary by the Council. (This sum was pledged before the close of the last session.) He also asked for pledges toward raising the endowment fund. *Meeting adjourned.*

From 12 to 2 the ballot box was open, and all the officers whose nominations were reported by the Nominating Committee were elected. The change in the Constitution by which one vice-president is elected each year to serve three years instead of three vice-presidents being elected each year to serve one year, made it necessary to differentiate the terms of service of the three elected this year. Miss Talbot serves three years, Dr. Andrews two, and Miss Marlatt one.

At 4 the College Club of Cleveland received the members and their friends at their Club House. The occasion was most enjoyable.

Sixth Session, 8 p.m., Thursday, July 2

Miss Isabel Bevier, University of Illinois, presiding. Miss Bevier called first for the report of the election of officers (already recorded) by the tellers. She next asked Miss Anna M. East to give an account of her work in the Philippines, which proved most interesting. (At next morning's session Miss East appeared dressed in the picturesque but cumbersome costume worn by the girls who were studying under her.) Miss Bevier then called on Dr. Langworthy to present the plan for two publications by the Richards fund, one a Sanitary Code for Employees dealing with Food and the other a Book of Balanced Menus for families of different incomes and different food requirements. He asked all there to help make these publications possible, to "give us an endowment fund so that we may do all these things not only for the good of the race, but in memory of that great and good woman, Ellen H. Richards, who founded this Association of which we are so proud."

Miss Bevier then introduced the president, Miss Sarah Louise Arnold, who made the president's address, a brilliant and vital contribution to the wealth of the meeting.

The second regular address of the evening was made by Dr. David Snedden, Commissioner of Education for Massachusetts, on "Present Problems in Home Economics," and was characterized by the clarity and keenness the educational world has come to expect from Dr. Snedden. *Meeting adjourned.*

Seventh and Last Session, 9.30 a.m., Friday, July 3

Miss Martha Van Rensselaer, president elect, presiding. The Secretary's Report was read by title, because of the lack of time, and ordered printed in the proceedings.

Secretary's Report 1913-1914: The work of the Secretary for the year has differed in no way from the usual work of that office. The correspondence takes most of the time that has to be given, and is heavier than most of the members of the Association suspect. Attendance at Executive Committee and Council Meetings, the writing of the minutes of these, and editing of the proceedings of the annual meeting and the *Bulletin* make up the work as it is. As it should be, the work would include making the Association known more widely, increasing its membership, increasing the subscription list of the JOURNAL, and gaining for the work the strength that would come from wider coöperation. This means writing more letters, but chiefly it means meeting more people personally on the business of the Association and making speeches or addresses as occasion arises. Only through such personal work can the Association be strengthened and developed.

It is obvious that no person with a professional position can give time enough to the Association work to do all this adequately, and even more important than this, the person who has another main responsibility cannot take the initiative necessary to the highest success of the secretaryship. For these reasons I have urged personally and finally (in May) in a formal report to the Executive Committee, the securing of a paid Executive Secretary who should give full time to the work of the Association. If the initial expense can be met, I am sure the position will carry itself financially through increased memberships. The Council has approved the plan and the money for the first year's salary and expenses will be raised as soon as possible. The Association will then take its place with the other important national professional societies, all of which have such a paid officer.

The Secretary in declining to serve for another year wishes to express her appreciation of the fine spirit of coöperation in the membership and of the cordial help that has been given her in the duties of the office.

Respectfully submitted,
ISABEL ELY LORD.

The Treasurer's Report was presented as follows:

REPORT OF THE TREASURER, JUNE 19, 1914, TO JUNE 22, 1914, INCLUSIVE
STATEMENT OF RECEIPTS AND DISBURSEMENTS

	Receipts	Expenditures	Balance+	Balance--
Association.....	\$957.75	\$1029.15		\$71.40
Journal.....	5561.47	4647.67	\$913.80	
Housekeepers' Dept.....	433.50	54.75	378.75	
E. H. Richards Mem. Fund.....	382.98	388.07		5.09
Permanent Association Fund.....	172.50		172.50	
Institution Economics Sect.....	162.76	95.38	67.38	
	<hr/> \$7670.96	<hr/> \$6215.02	<hr/> \$1532.43	<hr/> \$76.49
	<hr/> 6215.02		<hr/> 76.49	
Balance, Cash on hand.	\$1455.94		\$1455.94	
Balance, Interest-bearing ac., Harford Nat. Bk., Bel Air, Md..				\$519.44
Balance, Check ac., Baltimore Trust Co., Baltimore, Md.....				745.60
Balance, Second National Bank, Washington, D. C.,				18.40
				<hr/> \$1283.44
Permanent Association Fund, Emigrant Indust. Sav. Bank, N.Y.C.				172.50
				<hr/> \$1455.94

ASSETS AND LIABILITIES

Total Cash on hand.....		\$1455.94
<i>Assets:</i>		
Unpaid dues.....	\$190.00	
Unpaid subscriptions.....	1262.00	
Advertising.....	126.50	1578.50
<i>Liabilities</i> (Unpaid bills in hand).....	5.10	1573.40
Total Assets.....		\$3029.34

ASSOCIATION

<i>Receipts:</i>		
Balance from 1913.....		\$179.09
Dues collected.....		759.22
Interest on \$500 account in Harford Bk.....		19.44
		<u>\$957.75</u>

Expenditures:

Meetings.....	\$301.86	
Bulletins.....	136.44	
Officers' Expenses.....	176.60	
Managing Editor's Office 1/5.....	414.25	1029.15
		<u>\$71.40</u>

JOURNAL

<i>Receipts:</i>		
Balance from 1913.....		\$1012.98
Reprints.....		96.09
Subscriptions.....		3855.45
Single Copies, Back Numbers, and Volumes.....		107.16
Advertising.....		438.42
Bibliography.....		13.35
Books Sold, Profit.....		38.02
		<u>\$5561.47</u>

Expenditures:

Printing (including June JOURNAL).....	\$2840.32	
Editor's Office.....	125.84	
Managing Editor's Office, 4/5.....	1657.00	
Miscellaneous.....	24.51	4647.67
		<u>\$913.80</u>

HOUSEKEEPERS' DEPARTMENT

Receipts (Cash contribution).....	\$433.50
Expenditures.....	54.75
	<u>\$378.75</u>

ELLEN H. RICHARDS MEMORIAL FUND
ACCOUNT WITH ASSOCIATION

Receipts:

Syllabus	\$267.78
Pictures	75.75
Reprints	3.75
Contributions	34.00
Miscellaneous80
	<hr/>
	\$382 92

Expenditures:

Syllabus	\$79.37
Syllabus money sent to B. R. Andrews, Chm., Fund	
Com.	165.00
Pictures	90.39
Reprints	13.00
Miscellaneous	40.31
	<hr/>
	388.07
Balance—	<hr/>
	\$5.09

PERMANENT ASSOCIATION FUND

Receipts:

Balance from 1913	\$150.00
Interest to 6 30, for several years	22.50
	<hr/>
	\$172.50

No expenditures

Balance	\$172.50
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INSTITUTION ECONOMICS SECTION

Receipts:

Balance from 1913	\$104.76
Budget allowance	50.00
Contribution	8.00
	<hr/>
	\$162.76

<i>Expenditures</i>	<hr/>
	\$95.38

Balance	<hr/>
	\$67.38

Respectfully submitted,

C. F. LANGWORTHY.

Treasurer.

The Committee on Audit reported as follows: We have examined the books and accounts of the Treasurer and find them to be correctly kept and properly vouched.

FRANK H. WHITCOMB,

ALICE P. NORTON.

The Secretary read a letter from Miss Geraldine Gordon of London, bringing greetings to the Association in session.

The Report of the Committee on Resolutions was read by Miss Bevier, as follows, and accepted:

Resolved;

1. That this Association recognizes that a very great advance in this work has been made possible by the passage of the Smith-Lever bill and hereby expresses its appreciation of the efforts of those who have so long worked in this good cause.

2. That it is the sense of this Association that much benefit for all concerned may be derived from State Supervision of all Home Economics teaching. Therefore the members of this Association are respectfully urged to use all proper means to obtain such supervision in their respective states.

3. That we express our grateful appreciation of the substantial service rendered to the cause of Home Economics by the presence and inspiring addresses of the U. S. Commissioner of Education, the Hon. P. P. Claxton, and the Massachusetts Commissioner of Education, Dr. David Snedden.

4. That thanks are due to the Cleveland friends for the beautiful ride; to the College Club and to the Service Department of Nela Park for their generous hospitality.

5. That we express our appreciation of the courtesy extended to us by the press and its representatives.

6. That our special thanks are due to the President of Western Reserve University and his associates through whose generosity this meeting at the College for Women was made possible. Among those whose time and energy have been expended for our comfort, special mention should be made of the effective business arrangements of Miss Parker, the hospitality of Miss Annin, the stimulating contribution of Dr. Cutler and the scholarly address of President Thwing.

Respectfully submitted,

ISABEL BEVIER, *Chairman*,
AGNES HARRIS,
HELEN LOUISE JOHNSON.

Dr. Benjamin R. Andrews then, as chairman, presented the report of the special committee appointed by the Council to reconsider the question of the 1915 meeting and make recommendations to the Association. The other members of the committee were Mrs. Mary P. Van Zile, Miss Helen Louise Johnson, Dr. C. F. Langworthy. Dr. Andrews reported for the committee the following recommendations:

That the annual meeting as arranged be held at the University of Seattle, Washington, for four days about August 17 to 20, 1915, followed by an International Educational Home Economics Congress, in connection with the National Education Association meeting at the Panama Pacific Exposition about August 23 to 25, at San Francisco or Oakland. After brief discussion this recommendation was unanimously adopted.

Miss Van Rensselaer then opened the regular program by speaking briefly on extension work. She read Dean Liberty Hyde Bailey's "To Jericho," a new contribution to the subject of country life. She then introduced Miss Elizabeth Kelly, of the University of Louisiana, who gave a spirited account of Extension Teaching in Louisiana. She next introduced Mrs. Jane Q. McKimmon of the Farmers' Coöperative Demonstration Work, North Carolina, who spoke most interestingly on "Home Industries for the Country Girl." The next paper was to have been by Miss Mildred Veitch of North Dakota, on "The Visiting Teacher in the Farm Home," but Miss

Veitch was unable to come and her place was filled by Miss Ilene Bailey of the United States Department of Agriculture who spoke on the "Work of the Office of Farm Management." There was time for a brief discussion. Dr. Snedden spoke, and Miss Ferguson gave a brief account of the work in Porto Rico.

Further discussion led to the request that the chair appoint a committee to consider what proportion of the money available under the Smith-Lever bill should go to Home Economics.

Miss Arnold and Mrs. Norton made brief reports of the meeting of the Institution Economics Section at Lake Placid.

Miss Arnold then adjourned the Seventh Annual Meeting, with appreciation for what had been accomplished, and hopes for future good work. *Meeting Adjourned.*

The cordial hospitality of Western Reserve University, expressed especially in the never-failing thoughtfulness in planning and executing shown by Miss Mary E. Parker and the kindness of the many Cleveland people who helped make the four days pleasant, combined with delightfully cool weather to make the meeting the best yet. The registration was less than 200, but the attendance ran as high as 325, and we are sure that there were at least 500 individuals who were at some one of the meetings.

It was interesting to note how quiet and attentive the audiences were. There was none of the outer-edge conversation that so distracts those trying to hear papers, and most of those who came stayed until the meeting was declared adjourned. A good part of this close attention was undoubtedly due to the masterly presiding of the president, Miss Arnold. There are few presiding officers who can make even the voting on the revision of the constitution an animated occasion, but Miss Arnold accomplished it.

The organization of the special conferences was noted under the first session. These met not only in the free afternoons, but before and after meetings. Eight in the morning saw some of them in progress, and no record shows how late they continued in the evening. Some of the groups were small, some large, and many individuals complained about the simultaneous sessions of two or more conferences in which they were interested. But even these complaints showed the value of the arrangement, and many individual reports of enthusiasm have come in to show how worth while it is to arrange for such informal discussion of specific problems.

Exhibits were made in connection with the meeting as follows:

The Association: Portrait of Mrs. Ellen H. Richards; Series of portraits of the Pioneers and Patriots of Home Economics (now 24, to be extended); charts illustrating the work of the Association.

The School Lunch Committee: Exhibit prepared for the International Congress of Hygiene, 1913.

United States Department of Agriculture: From the Bureau of Nutrition, set of revised food charts; popular bulletins on food and nutrition, suggestions for inexpensive pictures for rural schools, extension and home betterment work. From the Bureau of Animal Industry, Dairy Division: clean milk exhibit.

Cleveland Public Library: Selection of books for the housekeeper.

Houghton, Mifflin Company: "Home Progress:" exhibit showing their extension education plans.

Whitcomb and Barrows: Exhibit of their publications in Home Economics.

Burrows Bros.: Exhibit of books in Home Economics, in part the books suggested by the Association office.

The presence of representatives from Denmark, Porto Rico and the Philippines gave a slight foreign flavor to the meeting, which it is hoped to extend to a real international taste next year.

The final word of the Report of the 1914 meeting is to urge all members to plan to attend the 1915 meeting in Seattle, August 17 to 20 (or thereabouts) and a few days later in Oakland or San Francisco.

ISABEL ELY LORD, *Secretary*.

INSTITUTION ECONOMICS SECTION OF THE AMERICAN HOME ECONOMICS ASSOCIATION

The Institution Economics Section of the American-Home Economics Association held its fifth annual meeting at Lake Placid, New York State, June 24-27. Lake Placid is in the heart of the Adirondacks. The club is on Mirror Lake within a short distance of Lake Placid and surrounded by marvelous mountains peaks. The club is an institution started by Mr. and Mrs. Melvil Dewey and promoted by them in association with others of unusual ability. It has the charm of simplicity in living where expenditure brings satisfaction of the highest and most lasting character.

The program of the 1914 meeting was pronounced a decided success. The membership present at the meeting numbered eighty-seven with daily interested visitors.

The program follows:

Wednesday, June 24

- 9:30 a.m. Miss Van Rensselaer, Chairman
 Address of Welcome by Mr. Godfrey Dewey
 Announcements by the secretary, roll call and response by way of introduction, discussion of equipment and general institution problems
- 8:00 p.m. Miss Rose, Chairman
 Cafeteria management.....Miss Boughton
 Buying lunch room supplies.....Miss Klaer
 Central kitchen plan.....Mr. Brown
 Discussion of lunch room exhibits

Thursday, June 25

- 9:30 a.m. Mr. Cole, Chairman
 Announcements
 Unit costs in institutions.....Mr. Cole
 Unit cost of food in institutions.....Miss Cooper
- 8:00 p.m. Mrs. Dewey, Chairman
 Buying, storing and handling food supplies.....Mr. Meigher
 Grading and standardizing food supplies.....Mr. Snyder

Friday, June 26

9:30 a.m.	Miss Gunther, Chairman
	Announcements
	The Laundry; equipment, plans and formulas. Miss Balderston
11:15 a.m.	Waste. Miss Watson
8:00 p.m.	Miss Arnold, Chairman
	Dormitory supervision. Miss Goodrich
	Administrative work in colleges. Miss Hamilton

Saturday, June 27

9:30 a.m.	Dr. Langworthy, Chairman
	Announcements
	The formation of a sanitary food code. Dr. Langworthy
	Courses in institutional economics. Miss Arnold
2:30 p.m.	Election of officers and other business

Committees were formed for promoting work during the year to be reported at the 1915 meeting. The annual session at Lake Placid is a school rather than a convention in which persons who are experienced are invited to present the results of their training and observation. There were daily discussions of questions of importance to those engaged in institutional work. Thus no one who goes to the conference can fail to secure help for his particular problem.

The appointment of committees is to establish leaders in various subjects important in institutional work at the present time. In order that all may be benefited by the year-round investigations, members and others interested in institutional work are asked to ally themselves to the activities of one or more committees. These committees are as follows:

Housekeeping Supplies, Mrs. Annie Dewey, Lake Placid Club, N. Y.; Laundry, Miss L. R. Bladerston, Teachers College, N. Y.; Per Capita Costs, Mr. Wm. Morse Cole, Harvard University, Cambridge, Mass.; Institution Economics Courses, Dean Arnold, Simmons College, Boston, Mass.; Dieticians, Miss Flora Rose, Cornell Univ., Ithaca, N. Y.; Public School Lunch Room Management, Miss Alice Boughton, Phila., Pa.; Cafeteria Management, Miss Hunn, Cornell Univ., Ithaca, N. Y.; Dormitory Management, Miss Elizabeth Goodrich, Simmons College, Boston, Mass.; Waste, Miss Mary Uri Watson, McDonald Institute, Guelph, Canada; Food Sanitation, Dr. Langworthy, Dept. Agr., Washington, D. C.

The executive committee requests that all persons interested in Institutional Economics write to the Secretary, Miss Emma H. Gunther, Teachers College, Columbia University, New York City, indicating their preference for the committee with which they will cooperate during the year for a definite investigation.

At the meeting of the American Home Economics Association in Cleveland a report of the Lake Placid meeting was called for and responded to as follows:

Dr. Langworthy: The Lake Placid meeting was one of the most inspiring meetings that one could hope to attend. The program was fine; the attendance large; the enthusiasm great; and everything was done for our comfort and pleasure. The best thing one can say is that the standard of work presented was very high, as was shown by both papers and discussions.

Miss Arnold: I want to say one thing about it. In the first place the Lake Placid

meeting is made possible by the hospitality of Mrs. Dewey and the Lake Placid Club. She has from the beginning been fostering all institutional science, and in the provision for thousands of guests during the year has so tabulated all this material that she has placed it at our disposal, and has given us all the fundamental foundation for our institution economics work. She made it possible for our institution section to be entertained with the utmost comfort. You would naturally suppose that those who reported would be those who were engaged in institution work, but very delightful things happened. One was that Mr. Hinkley who represented the Hotel Statler Organization, and has a very responsible position, was at Lake Placid to rest with his family, to get away from everything concerning institutions, but when he found that our convention was there he attended nearly every session, answered questions and talked at some length telling us about hotel organizations and their problems. Others of similar interests contributed to the success of the meeting.

Perhaps the most vital program that we had was that led by Dr. Cole on Unit Costs.

Another paper delivered by Mr. Snyder of the firm of Batchelder and Snyder of Boston gave us a very good session, and I should say of the Lake Placid Conference that it is moving in the direction of living issues. We had the largest attendance we have had, with very attentive audiences, very earnest discussions, and the help of men and women who came to us from very real work.

Mrs. Norton: One thing that impressed me most was the growth of institutional work. I think there were eighty-seven registrations at that meeting, most of the people in institution work of some kind, dietitians, managers of lunch rooms, or similar work. When I think of the first meeting at Lake Placid that I attended in 1899 when there were nine present, and realize that one phase of this work has grown to that extent, it seemed to me that we really had no reason to feel discouraged. It certainly is a fine start that people are beginning to do and see so many of the big problems that are connected with our Home Economics work.

REPORT OF THE DEPARTMENT OF HOME ECONOMICS AT THE TWELFTH BIENNIAL CONVENTION OF THE GENERAL FEDERATION OF WOMEN'S CLUBS

At the Twelfth Biennial held in Chicago, Monday, June 15, was set aside for Home Economics Day and the meetings were crowded. The Department of Home Economics is one that has grown very rapidly during the past two years; it has greatly enlarged the scope of its work and extended its influence. This increased growth and interest in all phases of the work has been due to the efficient leadership of Miss Helen Louise Johnson, Chairman of the Home Economics Department. To her untiring efforts was due the splendid program provided for the day.

Miss Johnson in opening the meeting said in part: "Two decades ago there stood upon the shores of this great lake a wonderful White City in which was one of the first buildings erected in this country to memorialize the work of women. Among the many memorable Congresses held in the Women's Building we find one which is headed 'Program for the Congress on Household Economics,' the first great public Congress ever held relating to the needs, the work and the interests of the home. Its Chairman was Mrs. John Wilkinson. Its speakers included of those still at work in this field Miss Jane Addams, Professor Marion Talbot, and Mrs. Mary Hinman Abel.

"Here at this Congress the Home Economics Department of the Federation of clubs was born. Under the name National Household Economics Association it had a separate existence for a decade. Then ten years ago under the presidency of Mrs. Linda Hull Larned, a merger was planned, and the National Household Economic Association ceased to exist, passing on its work to the General Federation of Women's Clubs.

"The special appeal of that first Congress, then of the Committee of ten years ago made in 1904 to a representative body of one thousand two hundred and forty-three women was to introduce the teaching of domestic science into every school in the land where girls are pupils. The appeal of this Committee is the same; but we ask this representative body of 4000 women to aid us in obtaining the third and even the fourth dimension in our Home Economics work that we may show its depth of meaning and teach the spiritual significance of daily life in the home.

"We have now reached the point when the determination of values in the material things of daily maintenance must be made in terms of human efficiency, but this efficiency must be of mind and soul as well as of body.

"We are asking for women that education which is required to grasp the facts of modern economic conditions, and to cope with them in the proper way to bring the resources of physics, chemistry, biology, and other sciences to bear upon the problems of the home and for that education which will give young women such spiritual satisfaction in their responsibilities and tasks as will lead them to view the vocations of homemaking, wife and motherhood, in the light of the world's needs, to realize that for them the highest, not the least and most meagre, education is required."

Miss Johnson then introduced the Hon. P. P. Claxton, U. S. Commissioner of Education, who delivered an address on the Educational and Cultural Value of Home Economics. He emphasized the possibilities on the scientific side of the study, and said that the application of our now vast fund of scientific knowledge was the important thing. In speaking of the cultural value of the subject, he made very clear that no subject in our schools offers greater opportunities for awakening and developing the best in us than the subject of Home Economics.

Commissioner Claxton was followed by Dr. C. F. Langworthy, Chief of Nutrition Investigations, U. S. Department of Agriculture. Dr. Langworthy told of the various lines of work and investigation that the Department is carrying on for the benefit of the women of the country, and assured the members of the Federation of the desire of the Department to be of service to homekeepers. A large audience gathered for the conference in the afternoon and the meeting was an inspiring one. Three topics had been chosen for open discussion: What is the Greatest Need of the Home Today? What Difficulties have been Encountered in Interesting Clubs in Home Economics; and Food Sanitation.

Mrs. H. M. Dunlap of Illinois introduced the first subject. She pointed out the necessity for an understanding of the financial relation between husband and wife, and the importance of training boys for husbandhood and fatherhood as well as training girls for wifehood and motherhood.

Some of the solutions offered for the home problems of to-day were as follows: comradeship between husband and wife; the putting of greater responsibility on the boys and girls; the establishing in the minds of homekeepers the right attitude of mind toward homekeeping; the realization of the fact that homekeeping is "big business" and that it needs a well trained mind.

Among those who took part in the discussion were Prof. Abby Marlatt, Wisconsin University; Dean Talbot, Chicago University; Prof. Isabel Bevier, University of Illinois; Mrs. Lynden Evans, Chicago School of Domestic Arts and Science; Mrs. Balish, New York; Mrs. Andrews, Massachusetts; Mrs. Norton, Chicago; Miss Caroline Hunt, Washington, D. C.; Mrs. McKibbens, Oregon; Miss Wimple, Washington; Miss Mary Sweeney, University of Kentucky; Miss Edna Rich, Santa Barbara Normal School of Home Economics; and Miss Crooks of the Milwaukee-Downer College.

Dean Talbot of Chicago University said in part:

"Not many generations ago the home was an almost independent unit. It manufactured what it consumed. It found its educational and social resources largely within itself. There were many hardships and not always much joy, but there were compensations in opportunities for training in efficiency, thrift, self-reliance, integrity and other so-called 'sterner' virtues. The home of today is in striking contrast. Modern inventions and modern industry, the school, the theatre and the playground have taken over many of the former interests of the home. It has been said that the young man is now learning to make the 'forward pass' in football when his grandfather would have been in command of a ship. I am struck by the number of students eighteen, nineteen and twenty years old who come to the university accompanied by their mothers who frankly and quite naively speak of them as 'little girls' and tell how they have never had to look out for themselves at all. I am often tempted to ask 'How old were you when you started a household of your own?' and not infrequently the answer comes, 'Oh, I was only seventeen or eighteen, but that was different!'

"To keep all the richness of opportunity and the joy of life of the modern home and to restore some of the values of the older home seems to me the greatest need of today.

"With the old fashioned chore gone, many parents seek in vain for means of character building and tacitly turn over the whole process to outside agencies. I would suggest as a device which is too seldom appreciated and utilized, the conduct of the business of the family by the group as a whole. If the wife again had complete knowledge of the family resources, as in the olden time, if the whole family took part in conferences to determine the expenditures and activities, if different duties and functions were then distributed among the members of the family by mutual agreement, I believe that the family would be more unified and strengthened. Moreover, there would inevitably follow from the smaller conceptions of mutual obligation higher standards of honor and much greater efficiency."

Mrs. Olaf N. Guldlin of Fort Wayne, Indiana, former Federation Chairman of Home Economics, presented the subject of Compulsory Education in Home Economics, discussing the recently passed Indiana law which provides that instruction in practical art subjects (agriculture, the industrial and household arts) must be offered as regular courses in the public schools of the State.

The discussion of the subject of Food Sanitation held the interest of all those present. Mr. L. E. Tolman, chief government food and drug inspector for the central district, showed the great necessity for having a uniform pure food law. He said there should be a uniform regulation of food supplies for city, state or inter-state shipment. For so long as there is no such uniform regulation, the inferior food that is refused in a district where there is a high standard is shipped to the district where the standard is lower.

Mr. Ernest Kelly, of the U. S. Bureau of Animal Industry, Department of Agriculture, gave a short talk on the sanitation of the milk supply, in which a more uniform and systematic local inspection of the milk supply was urged.

Milk which does not enter into inter-state commerce is controlled entirely by state and municipal authorities, and the U. S. Department of Agriculture is powerless to do any but coöperative educational work with the various local authorities. Whenever local authorities request aid in making their inspection systems more uniform and efficient, the Department of Agriculture is glad to help by sending a man to work with them.

The remarks by Dr. George Ditlewicz, of the Bureau of Animal Industry, U. S. Department of Agriculture, directed attention to the importance of meat inspection and to the great need of action on the part of state and municipal authorities to supplement the federal inspection, so that the rights and health of all consumers of meats can be properly safeguarded.

The speaker also directed attention to the fact that, under the Federal Meat Inspection law, the Department of Agriculture is without authority to enforce its terms except for meats and products intended for inter-state or foreign commerce.

Dr. Harry E. Barnard, State Food Commissioner of Indiana, stated that it is impossible to put enough federal, state or municipal food inspectors into the field to insure clean food for our people unless they have the constant active support of the women of the country.

Mr. W. Scott Matthews said that women's clubs, as representatives of the great number of purchasing housewives, have under their control the principal means of opposing impure foods. If women refuse to patronize the careless merchant, he will soon cease to exist, because no store can be maintained without customers.

Each speaker emphasized the point that pure food is now practically secured, and that the attention of the housekeepers should be focused upon securing a safe and sanitary supply of "clean food," inspected manufactories, bakeries, and the inspection of those employees who handle food in its making, packing or distribution.

The rest of the time was taken up with a very profitable discussion of the difficulties which the various state chairmen had experienced in their work, and how the many difficult problems had been met.

The most important resolution passed was the following:

WHEREAS, The Congress of the United States by the passage of the Smith-Lever act has made available federal funds for the education of women in Home Economics.

Be It Resolved: First, that we express our great appreciation of this action; and second, that we offer the service of the Home Economics Department of the General Federation of Womens Clubs in furthering the purpose of this law.

Altogether Home Economics Day was a wonderful success. It was a day full of inspiration and every Club woman carried with her from the Biennial the feeling that no field of club activity offered greater opportunities for doing the things worth while in life.

It was very evident that a single day's session was all too short to present the great movement in progress in Home Economics at the present time.

FLORA HARTLEY GREENE
PEARL MACDONALD

THE Journal of Home Economics

Home, Institution, School

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Vol. VI

DECEMBER, 1914

No. 5

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The Journal of Home Economics is published five times during the year, February, April, June, October, December, by the American Home Economics Association.

\$2.00 A YEAR. FOREIGN \$2.25. SINGLE COPIES 50 CENTS.

HOW TO REMIT. Remittances should be sent by Draft on New York, Express Order, or Money Order, payable to the American Home Economics Association. Currency, unless otherwise ordered, is at the sender's risk.

CHANGE IN ADDRESS. Notice of change in address should be sent Two Weeks before the date of issue on which the change is to take effect. The change cannot be made unless the subscriber's Old Address is clearly indicated in addition to the New Address.

AMERICAN HOME ECONOMICS ASSOCIATION
ROLAND PARK BRANCH, BALTIMORE, MD.

Entered as second class matter at the Baltimore Post Office.



The Practice House, Mississippi State College for Women. (See page 449.)

THE Journal of Home Economics

VOL. VI

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FUNDAMENTAL CONCEPTIONS OF HOME ECONOMICS¹

SARAH LOUISE ARNOLD

Doctor Grenfel, in lecturing to the students of Harvard University, chose as his subject "What life means to me." It is probable that his lectures, interpreting his conception of life, gave to the students the best that he could possibly have given; for the utmost that we can do for another is to interpret life as we have seen it. This may be done through pictures, through sculpture, through buildings, through machinery, through words; but the chief contribution of any individual is to render back in some fashion, for the service of others, the picture of life as it seems to him.

I therefore shall not apologize for using the pronoun "I," or for giving as my last message to you a statement of the essentials of Home Economics as they appear to me. I shall be more than glad if by this means I can contribute something toward perspective, and perhaps withdraw our attention from the immediate detail to center it upon the goal which we are seeking together.

Our conception of Home Economics must be both partial and progressive. It means various things to the various individuals gathered here tonight. It will probably mean something finer and better to each and every one of us in the years to come.

One cannot work very long with hundreds of girls without coming to realize that it takes girls, and all of us, a long while to grow up. John Fiske, in the *Destiny of Man*, shows us what gifts have come to the human race through the prolongation of infancy; but even

¹ President's Address, presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914.

John Fiske assumed that infancy had been outgrown when the child emerged from the care of the home. It is true, however, that we are never fully grown up. We have the infant's approach to any subject, the child's experience of it, and later the mature understanding. It is probable that our ideas of Home Economics belong to these three stages of experience. Let us follow our notions back to the beginning and see what the home has meant to us.

I think I was like most people in first looking at the home as the place where I belonged and where it was natural that I should be taken care of. This home was as fundamental as the forest or the rocks that bordered the sea. It never occurred to me that the home had not always been there. It was perfectly reasonable that it should shelter me and my family. I was unconscious of the fact that those early days of my childhood were shaping my various conceptions of life and giving me, through the daily teaching of the home, not only language but the fundamental and indispensable ideas which underlie the ordinary vocabulary. The facts and relations came as naturally to my understanding as did the home itself. But childhood receives this great gift with complete unconsciousness. It is only in the last years of life that we look back with understanding upon this wonderful experience. Yet the corner-stone of education is laid in the home and perhaps the essential contribution of the home is that it is first and foremost a school as well as a shelter.

Those of us who teach know how widely different are the capacities and the understanding of the various children who come to us to be taught. We say of one, "She has been well brought up," of another that her home is meager and poor. The understanding which the one brings is the product of the home environment and is perhaps the most important income from the investment which has been made in the home.

Over across the street from the old New England home where I lived was a knoll beyond the hollow. The house looked toward the sunset, which I saw always behind the pines and oaks upon the knoll. This last I called a hill. Beneath the trees were my playgrounds, and with my cousins I used to make playhouses. I never thought of the meaning of the word; playhouse was a thing by itself, not a house which I made in play. It was built of shingles with bricks; that was fundamental construction. It was modeled upon the Parthenon, though unconsciously. I remember that the bricks had to

be selected with great care, for it was a matter of the utmost necessity that the shingles should lie flat.

This house contained my real treasures, the things which I thought were essential to life—broken glass, cracked dishes and the nose of an abandoned teapot. I have never had any treasures since that were much more valuable to me than these were at that time.

I remember another playhouse, a somewhat dilapidated top of an old-fashioned covered wagon of the sort that appeared only in the East. In order to get into the back seat, one had to climb over the front seat. This wagon had for some reason lost its wheels and was set down by the barn. It was a most delightful house—the second stage beyond bricks and shingles, partly prepared for me by man and not despired therefor.

Now all of this is meant to recall to you that you and I made what we call playhouses. Have you ever seen the bird making her nest in the spring? Have you seen her fasten together the mud and the twine, the grass and the sticks, and then shape together with her breast the material which she has brought? The instinct of making her nest is her inheritance. I believe that there is born into every human being the same instinct that shows itself in the robin as she carries her mud and sticks to the place which she has chosen in the crotch of the apple tree. You and I showed it as we set up our bricks and shingles to make our playhouses. This is a primitive, dominant instinct, and I believe that it will never depart from the human race. One of the functions of Home Economics is to make clear that this instinct expresses the law of God, who himself has put into our hearts to make homes, to shape them and maintain them.

One purpose of ours, then, should be to take hold of hands with all the agencies which are at work doing this fundamental thing. Those who are busy in social service are working for the same purpose, to create and maintain the home and to make it as good as a home can be. I am comforted when I count the many who have the same vision and express the same desire. I hope that as the years go on we shall understand clearly this effort in others, shall recognize the common purpose and shall take hold of hands with all those who are helping to bring better homes to all the human race.

I have a compassionate feeling for the little girl who used to make her house of shingles and bricks, satisfied with broken china, with moss and acorn-cups. But should I not be just as compassionate

and tender in my thoughts of those who are building their playhouses all around us? What was the use of a playhouse? Merely to educate the child. Most of us would think that it did not matter if the mean-dering cow kicked it over.

Just a little while ago there was a shiver in one of our great cities. We saw the headlines in the paper that San Francisco had fallen to the ground and that its houses were in ashes. I had recently visited San Francisco and had admired the energy, enthusiasm and spirit that made the city what it was. The whole country was desolate as we thought of the homes that had been lost. Today, when you visit San Francisco, you find a fair and wonderful city. Other homes have taken the place of the playhouses that were there before. What had they been there for? What had they done? Ah! The enduring thing that belonged to the little playhouse of mine was the part of it that went into me—the thing that I became through the play, which was just as much a part of me as the work which I enjoyed no less. And the thing which endures in these other houses of ours is, after all, that which passes into us. If this is true, it was not San Francisco that went up in smoke and was gathered up in ashes. Go there today and you will find abiding the thing that was there before, only finer and stronger than ever. The real thing, then, that happens in our home-making is that the home becomes a part of us, and the thing to be counted essential in the home is the thing that the boy or girl carries away.

In that old gray house fronting the west was an old-fashioned secretary whose drawers were full of letters. Many of them had come from the battlefield and were written by "the boys" who had gone to the front. I read the letters over and over and knew, even as a child, what it might mean to show heroism on the battlefield. But I also read on page after page the assurance that the strength that was shown in battle was built upon the teaching of the home. What the mother had said and done, what the father had been, came out in the boy on the battlefield. I suspect that the spirit which rebuilt San Francisco had been nurtured in those earlier homes. It was that spirit that had made the home worth while and insured the rebuilding of the city.

As we grow older, then, we come to understand that the home which in childhood we had thought existed for our convenience, was not for itself alone. It is possible that even in our maturer years we

have thought of each home as a separate unit existing for itself or for a particular family. It is that, but it is also something greater. It is a growing-place, by means of which we become prepared to share in the great business of life, carrying our load and contributing our strength. We must not forget, then, that these growing-places will differ. The thing which is suited to one group will be inadequate for another. We must remember this when we are discussing values and when we are measuring efficiency. It will help us to exercise the compassion and tenderness of which I have spoken before. It will help us to be reasonable in our requirements. The thing in our neighbor's home which seems to us useless may be a link in the chain which is lifting her to a clearer understanding.

I once read in *Good Housekeeping* in the column called "Discoveries," a letter from a woman who described the use which she had made of a broken flat-iron. It had lost its handle. She converted it into a pin-cushion around which she tied a blue ribbon, thus adding to both convenience and beauty. I remember making some laughing comment upon the discovery; but I have no doubt that the flat-iron pin-cushion had the same use as did the teapot nose and the other bits of cracked china in my playhouse. We are all children of a larger growth, and the flat-iron, padded and beribboned and turned to a use for which neither nature nor grace had designed it, was probably performing the same function for its owner as did my acorn-cups and bricks and shingles for me. It indicated one of the stages on the way; it was one of the implements in her playhouse; and by-and-by there may come from her succession of experiences the same ideals that have emerged from yours and mine. If this is true, it behooves us who are interested in Home Economics to be very generous and tolerant and patient in our dealing with people in their various homes. I think I should have resented it very much if my big brother had said to me that my acorn-cups were good for nothing; it was not true—they were good for something, and he would have had no more right to interfere with my treasures of that day than with my bank account today. It is just possible that one is as important as the other. If we go with a ruthless hand and a critical eye into the homes of our neighbors, we shall find many things to displace. We would substitute a great many things of our own, for we are likely to forget that these friends are passing through stages of development which differ from ours at the present time, yet which are just as essential to them

as our various steps have been to us. We should be very careful in dealing with these treasures that belong to others, very gentle in speaking of them, very cautious not to underrate them. We may be perfectly sure that they will be abandoned as soon as these friends have found something better. We should deal with them as we do with the baby, when instead of snatching away the treasure which he has seized, we substitute something else which we try to make attractive. Let us act in the same way with our neighbors. We cannot make humanity leap from one stage to another.

We build the ladder by which we rise
From the lowly earth to the vaulted skies,
And we mount to its summit round by round.

All the way along, we spend our money for the things which seem to us worth while. I have often said to college girls that I would like to have a panorama which would report faithfully to me in succession the things which they have loved from their childhood up. How the values would change! I know a small boy, a minister's son, who was devoted through his childhood days to the idea of becoming a clown. His older sister frankly told him that he was likely to fulfill his ambition, but nobody else laughed very much at it, and he lived through the period when to be a clown was his highest ambition. He has changed his sense of values. I wonder if we are not all paying high for the treasure which we substitute for the great essentials.

A father said to me the other day, "I have just been talking with my boy and telling him that every dollar stands for the work of some man and before he spends it, he must stop to think what he is spending it for." I shall not discuss this evening how women spend the money that men have earned. We have heard much on that topic and there is room yet for greater wisdom than we now display in such spending. But we hear much less of another theme which I wish we might discuss in our Home Economics. The thing which we all are spending most prodigally is that precious, precious thing which will never be returned to us, called time. To the old gray house facing westward, used to come, when I was a little girl, two dear old great-aunts named Betsy and Dolly. They came in a covered wagon from a street just a few miles away called Back Street. They were safely convoyed to our home by an old and steadfast sorrel horse. By his help they crossed the railroad track and followed the wide,

sandy road until they reached us. Having been welcomed and brought in to their rocking chairs by the window they began to "spend the day." After a half hour or so, the train would rumble past the field behind the house and Betsy would say to Dolly, "We have just escaped the cars."

The thing they came for was the thing that nobody talks about now. Who is there in this audience who ever "spends the day" with a friend? I wonder what it would mean for you and me to spend a day as wisely as we try to spend that dollar bill? What is all this labor that is conserved in dollar bills? What shall we give to this poor mother who is struggling to support her children, another dollar if she will work all day or an hour to spend in quiet and peace? I sometimes wish that we might stop talking for a while about the thing called efficiency and try to learn how we are spending the stuff that life is made of.

Not long ago some fellow-passengers on a train told me of a recent visit to a great factory where the administration presented the triumph of efficiency. "It was a fearful place," said the gentleman. "I saw men standing in ranks and doing one thing over and over all day long at the topmost speed. If anyone halted for a moment, he stopped the whole line. He must keep up his speed so that his neighbor would not lose a minute." The gentleman's wife added, "Think of spending a day like that and all the days! What have you left at night? What will you be at the end of a year? What can you do besides the one thing with which you have filled your days?" I wish that we might give more thought to the wise spending of time. I wish we might revive that conception of the home which in the olden time permitted the spending of a day with a friend. We spend our money prodigally in that which we call entertainment. Let us be more thrifty and spend our hours with our friends in the home which has learned how to provide for them the richest treasures of our experience.

When once we have realized what the home is for and what its richest gifts may be, we shall make different decisions as to comfort and convenience. A young friend of mine married but did not set up housekeeping. She and her husband "boarded." Perhaps you do not know what that means. I once asked a small boy in school where he lived, and he replied, "I don't live; I board." These people "boarded" because they wanted to "save." The wife became a saleswoman and liked it so well that she would not go to housekeeping.

"I like to spend what I earn." "What do you buy," I asked. "Oh, clothes, suits, hats, ribbons and gloves." "Let us keep house," said the husband. "Oh no," she replied, "We can have so much more if I earn, too." So the days were spent for hats and clothes and the great and beautiful thing which these two might have had in their lives, never came. Should we not try to find out, first of all, why the home is worth while and what things are worth while to do in the home, instead of multiplying recipes and adding mere conveniences? Shall we not come to understand what it means to "spend" our days in the home so that the lives of all who share its shelter shall become great and beautiful? What a rare income that would bring us! How we should discover the worthlessness of many of the things for which we strive and the marvel of many which we now let go! A little niece of mine walking by my side at the seashore and handing me one white stone after another, said all at once, "It is so queer, so many beautiful things you pass right by." The childish words were a stab. She was seeing there on the seashore the beautiful things that I had passed by, and I had lost the vision and understanding of childhood. In Jeannette Lee's delightful book, "Uncle William" tells us that "most of us don't pay attention enough to just a-livin'." Is there no path by which we can return to such understanding? Can we not find in our homes the great joy of a simple and wholesome life in which the essential things come first?

If we are justified in thinking of the home at first as our very own, the place of shelter where we belong, the place that was made for us and where we are first, we must also remember that this is not the only light in which the home must be considered. Someone has said, "Charity does begin at home, but it should not end there." While the home is for ourselves, it is also for others. A friend of mine has often said to me that old-fashioned hospitality is dying out. When she was a girl living in the big city, she often found her mug and tooth brush on the attic stairs, which meant that she must give up her room for the night to some friend who had come. I recently met another friend, an attractive old lady, who said that she had "put up" her friends at the club—"So convenient, you have no bother of entertaining." It was a far cry from the day of the mug and the tooth brush on the attic stairs, with the friends on the inside of the house and under the roof, to this day of prosperity, when one can care for her friends by paying the bill at a club.

Some of us remember the time when every neighbor called upon the home for strength or comfort or help. When a neighbor was sick, someone in the family went to nurse or sit up at night. The "watcher," when death had visited the house, was the next-door neighbor. Now, one goes to a big hospital and the rest of the world goes on just the same; but we have bartered our birthright for a mess of pottage. The home is not for ourselves alone. It is for all who need it. Elizabeth Whittier pictures the Bedouin sitting at the door of his tent and calling to all who are in need, to come in. She urges upon us the same open hospitality.

Whoever thou art whose need is great,
In the name of Christ, the compassionate
And merciful One, for thee we wait.

Jane Addams tells us of the crowded tenement house into which was welcomed a young woman whose husband had deserted her. She led one baby by the hand. Another baby was yet to come. The father of this tenement family went out and slept in the park for two weeks, night after night, that there might be room left in the crowded rooms for this deserted woman and her child. Think of the beauty of that hospitality and friendliness. Are the virtues of hospitality restricted to the very poor?

I have suggested the essential elements of Home Economics as I see the work. I hope we shall not change for the thing called efficiency the real treasures of our home life. I hope that we shall not barter our birthright for the mess of pottage. I trust that we shall not exchange hospitality for convenience and comfort. I trust that we shall have such vision as will reveal to us what homes are for and that we shall come to understand that no peace can come to any home of ours unless we help to bring peace and fullness and worth and comfort and understanding to all homes in this beloved land of ours.

CURRENT PROBLEMS IN HOME ECONOMICS¹

DAVID SNEDDEN

Commissioner of Education in Massachusetts

Dr. Snedden in his address filled the rôle of prophet and of critic and thus lays us under a double debt. We often ask of the social economist that he foretell for us the material surroundings and altered function of the home fifty or even twenty-five years hence, so that our curriculum and social plans may be adjusted to the inevitable changes, but we ask in vain. We are, therefore, the more glad to give space to Dr. Snedden's views of future social conditions.

Equally suggestive, whether we agree with him or not, are his criticisms of the current methods of instruction. The JOURNAL would be very glad to receive from its readers discussion of these views.—*Editor*.

We may well assume that if present tendencies continue, there will be within the boundaries of the United States upwards of one hundred and fifty million people in 1964. Probably there will be among these relatively fewer very rich people, and also fewer very poor people than at present. Families of middle class or rank, in the economic sense, will have slightly larger families, and people less well off will have smaller families than at present. The great majority of married women will give their entire working time to home-making, with employed assistance as at present only at critical periods. Nearly all young women will enter upon wage-earning careers of from five to ten years in length prior to marriage, and after having received a suitable general education. The state will insist that every girl or young woman shall at some time learn, in a definite and effective fashion, the more essential arts of sound home-making.

By that time we shall have learned much more than we now know regarding the most effective methods of education in Home Economics, as well as in other fields. Parents and, when feasible, girls themselves will be carefully and authoritatively advised at successive stages as to the most desirable educational and vocational careers which daughters should follow in the light of their abilities, their economic conditions, and their persistent interests. Young women will be given definite preparation for wage-earning callings—many of which callings will probably be in homes, as we cease relying upon immigrants for domestic service. But the requirements of preparation for wage-earning vocations will not be allowed seriously to interfere with the far more

¹ Presented at the Seventh Annual Meeting of the American Home Economics Association, Cleveland, 1914. Dr. Snedden's address is given in part.

important social demand for systematic training for home-making. It will be accepted as fundamental that in a sound and enduring society a large majority, approximating one hundred per cent, of all women must be expected eventually to become wives and mothers. It will be generally agreed that we cannot permanently depend upon recently imported peoples either to perform the so-called menial service of the home, or in largest measure to recruit our population. It will be widely recognized that a sound citizenship and a people capable of establishing and sustaining wholesome standards of living can only be developed under conditions favoring the establishment of a maximum number of relatively small and well-kept families. This condition will also require that very few sound men and women suited to become fathers and mothers shall forego the fine responsibilities of parenthood.

The proper home in such a society will itself be a work of art, and its suitable management will require the skilled service of a well trained woman, willingly accepting such a work as a career reaching over many years and to be entered upon with much forethought. Obviously, the preparation of the young woman for such a career as home-making will be no small task. Her education to this end must itself be a purposeful and scientific affair, and especially so in an age in which custom and tradition as the foundation of practical activities will be still in process of being replaced by definitely scientific procedures. Certain prominent features of that education can even now be forecasted, in the light of current developments.

Above everything else, it will be an education based upon practice, upon doing, followed by comprehension of the theory back of the action. The girl as learner will first make beginnings in the practice of any particular household art, after which she will be led to comprehend the technical—that is, the underlying scientific or artistic—principles of the art, as well as her educational development permits. The general control and administration of all this education will be under schools, because schools are specialized agencies established to give education; but, these schools will utilize, as a most valuable part of their educational ways and means, the homes in which girls live, or work for hire.

It will then be clearly recognized that there are two distinct forms of education in the home-making or household callings, according as the controlling purpose is to establish right standards of *utilization or consumption*, on the one hand, or on the other hand to establish effec-

tive powers of *working, doing, executing or performing*. The pedagogical means and methods of these two forms of education will differ as widely as will the aims to be realized. We can, for example, readily imagine that by 1964 very little of the clothing to be worn by children will be made in the home; and that under such a condition, each woman will receive quite definite training not in the art of making, but in the art of selecting. She may not be trained at all in making clothing of any sort, any more than she is now trained in spinning and weaving. She will be trained to make what the economist calls an effective and intelligent demand, as consumer, on people who make a business of producing clothing, repairing shoes, etc. On the other hand, she may possibly be trained to be an efficient repairer of clothing on her own account. She will be, undoubtedly, trained in the arts of nursing a sick child, but in the field of medicine proper she will be trained chiefly to choose and to use wisely, properly trained medical service. As regards indeed all of the thousand forms of usefulness which the home-maker of the future will render, a fairly sharp distinction in preliminary education will have to be made according as her function is to be, in the first place a producer of utilities or skilled technical service, or in the second place a buyer, chooser and utilizer. A system of home-making education which does not make this fundamental distinction will flounder amidst perpetual confusions and short-comings.

It is to be hoped and expected that in the social economy of the future, household service on a wage basis will be not less attractive than other gainful callings, but rather more so to young unmarried women. The bulk of employed household service of 1964 will probably be given by fairly well trained young women prior to the age of marriage. Society will prize this form of service because it will link up with a systematic training for home-making in a way which will be more effective for all concerned than wage-earning work in the industrial and commercial callings. To help realize this end, obviously, women will have to become better employers than they are at present. Many women today, are, as employers of service, hardly more humane or intelligent than the managers of our worst corporations so far as making for the better development of their employees is concerned. In this respect new ideas and ideals are even now rapidly forming, and with the gradual cessation of immigration, necessity will add pressure to present tendencies to induce women to make

wage-earning household service an attractive and upbuilding force in society.

The first tendency which is, perhaps, wrong in much of the current teaching of Home Economics lies in the direction of its bearing on current over-refinement or over-elaboration of standards of living. We focus our attention so largely upon quality of service, upon standards of taste, that we fail to give sufficient attention to the cost of what we produce in terms of money, time, and energy. Many of us must believe that in middle class society as it is today, an overwhelmingly disproportionate amount of energy is expended upon refinements of personal decoration, household cleanliness, table service and in other related directions. We believe that our attainments in these directions are purchased at the very serious expense of more children in the family, the freedom of development of the children already there, the health of the mother, and the development of all the members of the family along other more wholesome and enduring lines. If it can be demonstrated that in these directions there are at present many harmful tendencies in society, then surely schools of home-making must set their standards in the direction of simplification, of correct valuation of the relative advantages of different things which painstaking labor and money can procure, and of putting a premium upon what is genuinely higher and more wholesome living. Now, with of course notable exceptions, schools are not yet doing this in any degree adequate to the requirements of the age in which we live.

A second wrong tendency in much of the Home Economics teaching of today, as is found in the prevailing practice of introducing the instruction with the more abstract underlying principles, and in emphasizing these at the expense of the study of their practical application.

Now the one clear object that the layman can discern as guiding in the teaching of Home Economics is the intellectual mastery of certain organized knowledge. To a slight extent, also, it is evident that certain definite forms of skill in execution are made to serve as objectives. But if one asks what more ultimate purpose this knowledge or that particular form of skill is to serve in the well-being of the individual or of the society to which he belongs, the replies received will be vague and inconclusive. Some of the larger ends alleged to be held in view are really faith ends, rather than scientific ends—that is, they represent aspirations rather than clearly defined goals, as to which

the stages in the process of realization are capable of definition, attack, and gradual mastery. Courses of instruction in Home Economics as well as classes at work seem to lack a definite and reasoned consciousness of final aim or purpose. In this respect Home Economics is no worse off than many other subjects, especially in the fields of secondary and collegiate education. But because there is here a new field, unhampered by traditions and ancient customs, one is tempted to look for larger manifestations of the scientific constructive spirit than are to be found in the teaching of the historic subjects.

Home Economics will never come into its full heritage until it is organized with definite reference to the attainment of ends that are demonstrably valid and so clearly formulated and evaluated that the efficiency of our procedures—our studies, practices, and methods—can be tested against them. This will require, for one thing, that we decide to what extent vocational aims shall control in our work; that we decide for what vocations we are preparing; and that we unsparingly test the efficacy of the means which we adopt. It means, for another thing, that we decide how far and in what direction Home Economics work is useful as a means of general culture and civic capacity—the development of powers for wise choice and utilization as against powers of execution; what are the specific forms of this culture and civism that are most worth while and how they shall be attained in the cases of various groups of young people with whom we may deal; and how, again, we shall test the serviceableness of the means employed.

What seems to be another prominent defect in current Home Economics education is its failure to use the living home as a part of its opportunities for coöperative effort and, indeed, as its chief working laboratory. Why should not many phases of Home Economics in secondary schools be so taught that the practical phases of the work can be carried on in the homes of the girls themselves. If students are living under dormitory conditions, why should not these serve as a basis for the practical study and application of such arts as cooking, sewing, etc., by groups of students limited in size?

Reference has already been made to the over-technical and insufficiently practical character of much of the education offered. In part, this is due to the ease with which so-called technical subjects—pure or applied science, applied art, etc.—can be taught in accordance with the traditions of academic education. The most difficult teaching

is that which, proceeding through practice on projects based upon the practical requirements of life, leads into a mastery of the related and needed technical knowledge. But there is abundant experience to show that for most students such an approach, properly made, is the most effective that can be devised.

It is probable that in so far as work in Home Economics is to be regarded as vocational, programs should be so adjusted as to insure a large amount of concentration during the time that the vocational aim is held in view. For example, a day school for home-making should give from six to eight hours per day to that and related subjects; at least half of this time should be spent in the home, working on definite projects which the school has assigned; this work should be supervised by the regular home-making teacher, visiting the girls at work as far as practicable; the school instruction should be based largely upon the practical projects being followed; and general reading in related fields should be a part of the course. A concentrated program of this sort will give more effective results in three months, than years spent on the two or three hours per week plan now so widely in vogue. Such a program would insure that each teacher will learn the requirements, the standards, and the potentialities of the homes of her pupils. She will be compelled to make her teaching practical because to so large an extent the results will have to speak for themselves. Her work should be organized on a definite project basis. This is easy to secure in most phases of the teaching of home-making. Let a girl be responsible for the making of definite articles of clothing; or for the preparation of the family breakfasts for two weeks; or for doing all the baking required for a similar period; or for taking full charge of an infant for a week; or for undertaking a definite assignment of laundry work; or for doing the revarnishing of the furniture of two rooms—these and scores of similar assignments are possible. Of course the teacher should have no more pupils than she can handle effectively.

What is here suggested would doubtless involve almost a revolution in much of the educational practice of our household arts classes. Few, perhaps, will agree with this pedagogical view, but my experience as well as my understanding of recent studies of psychology and pedagogy, convince me that it is in this direction we must look for a genuinely functioning education, especially in the vocational fields. This proposal implies no necessary lessening as to the scope and amount

of study which shall ultimately be given to the principles of science and of pure art as these apply in practice, but it reverses the order of approach and procedure now commonly used.

A distinction may, of course, within limits be drawn as regards this alleged wrong tendency in vocational training, between courses in colleges and technical institutions designed to prepare teachers, administrators, and research specialists, and those other far more numerous courses designed for prospective home-makers and the rank and file of workers. The importance of thorough-going technical training for the former class is freely admitted. It is probable that, because in the earlier institutions dealing with Home Economics the pressure for trained teachers and other leaders was so marked, almost all programs became more or less affected by the somewhat peculiar nature of these demands. It seems to be characteristic of almost all kinds of vocational training to be unduly influenced by the standards appropriate to the exceptional few who will take leading positions.

We shall have to learn that nearly all vocational education—as, indeed, other forms of education also—must be individualized. The teacher must be regarded as a supervisor of apprentices. We coddle too much in our practical classes at present. Each pupil must have his job—a large job, fairly well within his capacity. Much planning and prearrangement will be required. Some directions, read or given, may convey technical knowledge, but the bulk of the technical knowledge should grow out of, and not precede experience. The pupil must early learn to rely largely upon printed or written directions.

It is possible to apply these principles also to evening and part time instruction in home-making, for working girls. Give one evening per week to class-room instruction; and let the teachers give two other evenings per week to visiting the girls in their own homes, while they are at work on the projects assigned.

If we ever come to the point where a considerable number of girls are working as wage-earners in homes, the problems of instruction for these should be simpler still.

Still another deficiency which seems to characterize much of the Home Economics teaching as found in elementary and secondary schools at the present time is failure adequately to take account of the standards of living to which the average American home is necessarily limited. Is it clearly realized that in the large majority of American families in which the husband and father is a wage-earner the total income is less than \$1000 a year? Do the programs of Home

Economics instruction now found, especially in our secondary schools, seem to be based upon a clear conception of the necessary limitation as to expenditure existing under these conditions? To what extent are the teachers of Home Economics themselves cognizant of the actual standards of living which must be based upon incomes of this magnitude, or in immigrant centers, the national tastes and habits regarding special dishes? Can it not be charged that our Home Economics teaching today is adjusted too exclusively to standards of living of our middle class population, a level of population where, broadly speaking, the need for this instruction should exist in least degree? We have looked in vain in the programs of most of our systematic Home Economics teaching to find clear indications of a thorough-going realization of the facts here suggested.

SCHOOL LUNCHES

Extracts from reports made by leaders in the school lunch movement in three large cities are here given. As will be seen, the social possibilities of the school lunch are to be regarded as of no less importance than the proper nourishment of the body.

EDUCATIONAL AND SOCIAL POSSIBILITIES OF SCHOOL LUNCHES

MARY E. L. SMALL

To supply the immediate need of food, private philanthropy established in some places the "penny lunch" and while it filled a need, there were many criticisms that it led to pauperizing, to relieving women of maternal responsibility, to creating wrong values and in many instances to promoting wastefulness and disorder.

To take away the stigma of "pauperizing," the city ordinance of Buffalo commands "food to be sold at cost of material"—the fund appropriated being available only for maintenance. Under these conditions, parents in the very best districts have petitioned for the warm lunch for their children, when the distance of the school has precluded the possibility of going home at noon. The children of the well-to-do parents and the children of the poor have learned to sit quietly as one family, to talk pleasantly with each other, to eat their food properly, and many acts of courtesy and generosity have been encouraged.

These lunch rooms reflect the personality of the teacher in charge, and sometimes rooms with a north or west exposure appear to be full of sunshine in the noon hour; the gentle, smiling teacher (of whom the children said, "Oh, we love our cooking teacher!"), the happy children, a flower or two or some growing green things on the white tables, a quotation on the blackboard, with perhaps a picture or two on the walls. A favorite picture for the lunch room is "Thanksgiving" (Jessie Wilcox Smith) and its silent example is much more potent than many words on the subject of thankfulness.

There is much illustrative material ordinarily used in Domestic Science laboratories which is readily adapted to the lunch room, and which adds interest as well as educational value.

The Perry Picture Company has many beautiful copies of fruit, vegetables, nuts and fish. Dr. Langworthy's Food Charts, for sale at the Government Printing Office, are invaluable. These pictures form the subject of many informal lessons in the nature of talks, the children acquiring much valuable information almost unconsciously.

Habits of neatness are inculcated; running water, liquid soap and paper toweling are provided, and the children are required to wash their hands before the meal.

The physiology of digestion is taught in simple talks on what to eat, and when, and how, and why. One principal testifies that since the "Cocoa Treatment" was instituted in her school, she has ceased to doctor children in the afternoon for head and stomach aches.

The nutritive value of the school lunch is undisputed—the social and ethical sides are not so universally recognized except by those in close touch with the work. To those actively engaged this is the most important part of the movement. Perhaps nothing will more clearly express what can be accomplished along these lines than two personal observations.

As a nation we are somewhat lacking in manners; in no case more strongly marked than in the half grown youth, who is apt to be brusque and self-conscious. In one of our schools here, at the end of the luncheon, one can see daily the fifteen or sixteen year old boys, passing through the aisles collecting the trays in an orderly, courteous manner with never a question of the girls sharing in this arduous work, and never a giggle nor nonsensical remark as the boys perform this voluntary task.

In one of our poor districts, poor as regards money, but rich in school spirit and loyalty to ideals, the pupils, for various reasons,

brought their luncheon to school. The girls ate their cold meal in a class room, but the boys in a miserable basement. Upon the installation of equipment to provide hot cocoa to supplement the cold food, permission was granted the boys to share the class room, and this privilege the boys never lost. In a few months all the "news-paper wrapped" lunches had disappeared, and in their places paraffin paper and wrapping paper containing appetising lunches. The spirit of interest and coöperation between principal, teachers, pupils and parents was wonderful. At the end of the first year when the teacher in charge, herself a gentle woman, proposed a birthday party, every child responded with enthusiasm to the suggestion, and boys and girls alike vied with each other in anticipation and effort to make it a gala day; they begged that the members of the commission be invited to share in their party. No brighter, more genial, more truly illuminating scene can be imagined than that of those happy faces, when the birthday cake with its one candle was cut and shared by guests and children. There can be no doubt that more than a penny's worth had passed into their hearts.

In another East Side school where love and generosity reign supreme, the serving of soup or cocoa is presided over by the principal herself. The lunch room is called the "coöperative cafeteria," for everyone delights to help.

We find in those schools where the proper, warm lunch is presided over by a woman of force, ideality and love for her work, children running home at the day's end, happy and cheerful, showing many little acts of kindness for each other, not so commonly seen in schools where this opportunity for personal teaching has not been offered.

NATIONAL CONSERVATION AND NUTRITION DURING CHILDHOOD

MARGARET McMILLAN

"Thanks be to God we eat plentifully, and be not gone crokyed and hungry as others are!" *Old Chancellor of the Exchequer.*

It has often been noted that great reforms are nearly always brought about by very small and weak creatures. The little child under five years of age has somehow managed to show that the methods of schools for much older children are mostly wrong. The defective or backward have forced the study of brain function and physio-

logical method for the normal. It is now the turn of the poor little starveling to enter the arena, and it looks as if it were going to be the mover in the greatest reforms of all.

Dr. Burney, in the last Report of the Deptford Health Center says that 90 per cent of all children are very well born, but only ten per cent are at all well bred, or rather, well fed. And if the helpless multitude of little creatures could speak and knew what to say there is no doubt that they would cry out in chorus, "Please give us real milk, mother's milk, for nine months if possible, and then go on giving us plenty of good milk fat for years." Alas! the good milk is yet far to seek in many parts of even the great capitals of the world. Thousands of London babies are fed on skimmed milk. Not only rickets, adenoids and anaemia, but also backwardness and every kind of mental shortcoming are associated with this "skimmed," lean, starchy, and faulty diet.

After years of talk, and the appointment of ministers and officials at high salaries, leaders in all the papers say we get a milk bill that does not provide milk. It provides inspection, but no one can live on inspection, except, perhaps the inspector. The inspector regulates, prohibits, and often, it may be, keeps poison out of the home. The business of providing good milk, and bringing that good, pure milk into every home where there is a child or children is not the work of the inspector. Even the latest milk bill excludes the problem of supply. The rich and well-to-do can have good milk; their milk-supply can be made safer; every kind of precaution is taken. Yes, but the birth rate is falling in Mayfair. It is not falling in Shoreditch or Deptford where guaranteed milk will not come. In legislation one has to think of the children of mean streets, because there are the roots of the nation. For good or ill these are to carry on the life of the race, and everything depends therefore on good milk getting into the Deptford or Shoreditch home. It seems reasonable to hope that the great county councils and city councils who engage in so many business enterprises and who supply milk already to hospitals, infirmaries and workhouses should at last start farms and dairies outside of the cities for supplying milk to the children of the people. In any case the problems of education can not be solved till the milk question is settled.

Millions are diagnosed as naturally dull, unfit for secondary education. But why should we jump to such a conclusion? It would be better to try the effect of good feeding in early childhood.

To come now to the child of school age. During the past year two meals were given daily to over forty children in a very poor district of London. These were all anaemic cases, unfit to attend the ordinary schools, and excluded by the doctors of the Health Center. They slept in an open shed throughout the winter and lived entirely out of doors. Breakfast consisted of fine Highland oatmeal porridge with milk. (Every child had a pint of milk daily.) For supper there was boiled pudding, rich in fats with sweet syrup, or vegetable stews with hard proteid biscuits, milk and sometimes hard fruit such as apples.

During the months of October and March the boys put on weight rapidly. The average increase was 6 ounces per week. Formerly, at home, they were probably gaining 1 ounce per week. A few boys remained stationary. One, who made a notable cure from chorea gained nothing in weight. During the summer months the increase was less. The boys gained on an average of 4 to 5 ounces per week.

The girl campers did not stay to supper. They merely slept out and had an oatmeal and milk breakfast at their own camp. Within two months $\frac{3}{4}$ per cent of all the girls gained substantially in weight. Two girls gained over $3\frac{1}{2}$ pounds in a month. One child gained $2\frac{1}{4}$ pounds in three weeks. Another gained 1 pound in three weeks. Three out of seventeen lost weight—one very slightly. As a rule, there was in the case of boys and girls a great increase in weight during the first week after entrance, as usually happens in all such experiments. In the Christmas holidays, at home, the boys lost weight rapidly—the average loss being 8 ounces per week.

The children were greatly improved in appearance. Formerly sallow and pale, they now became blooming, fair-skinned, rosy-cheeked and bright-eyed. The tonic effect of pure air, by day and by night, was doubtless one great cause of the change but the breakfast also had a great effect.

One object in allowing the home to provide the dinner is that in this way the parents may be drawn in to take part in the experiment.

The ideal dining hall should be outside, or rather in the pavilion, or open building of a camp-school. It is impossible to make the surroundings too bright and too lovely. The shed walls should be discolored in light color, and the floor polished and dustless. The smaller tables, with tiny chairs should be put in the middle, and here a monitor should sit. The table should be covered with a snowy cloth, and gay with flowers. Every day children should be appointed

to arrange the flowers, to keep the dishes and dining utensils bright and to arrange the pavilion for dinner. Paper table napkins should be used, and the standard of cleanliness kept high. Every child will take a pride in the cleanliness of his hair, nails, hands, clothes, etc., if encouraged to do so by example, and by having the things he needs for washing.

The supper or meal hour should be for children the happiest of the day. Joy helps digestion. And yet it takes a good deal of time and thought to prepare children of the poorest class for this new happiness. They are used to bolting food, and have no joy at all in eating but the satisfaction of stilling hunger. We have tried at Deptford to have guests to supper at least once every week, usually on Friday. To that day the children now look forward. Some of them sit at the guests' table which is a great privilege. They talk a little at times and they listen to conversation, which is a new and glad experience for them. Sometimes they will fix their eyes wonderingly on the stranger who comes from far off lands. The children at the other table talk freely though no shouting is allowed, and sometimes, if something very interesting or amusing is said at the guest's table they are called on to share it. All troubles and hardships and failures of the day are forgotten.

This eating with the children and making every meal a festival of joy and human fellowship must follow the mere selection of foods, else were the enterprise not worthy of a true democracy. It is the thing that is missed at all mere charitable functions, and it degrades these to the level of mere foddering. At the public dining table, spread by the public spirited, a new order of civilization may be founded.

SCHOOL LUNCH PROGRESS IN NEW YORK

IRA S. WILE, M.D.

The New York School Lunch Committee, in coöperation with the Bureau of Welfare of School Children of the Association for Improving the Condition of the Poor, has maintained a service available to 24,087 children in 17 public schools with a minimum registration number of 123 and a maximum of 2,352, all of them situated in the districts in which the need for such a service is pressing.

In addition to this noon warm lunch service, the Committee has

operated a special 3-cent warm noon lunch of milk and crackers at 10 a.m. for anaemic, ungraded and crippled classes.

The lunch service is operated by virtue of the permission granted to the Committee by the Board of Education. Through its various committees the Board of Education has coöperated in a most encouraging manner.

Too much cannot be said of the valuable aid rendered by the principals in the schools where the lunches are served. It is only by dint of their personal sacrifice and tireless devotion to the cause represented by the Committee that the service has been enabled to take such advanced steps during the past year. The teachers also have given much of their time to assisting in the maintenance of order by children, over which we have no control.

In each central kitchen a manager is in charge, responsible to the supervisor. She is engaged usually for five hours a day, the hours being from 9.00 a.m. to 2.00 p.m. or from 10.00 a.m. to 3 p.m. Her function is to collect the pennies during the noon hour, make whatever cash emergency expenditures may be necessary, order and store surplus food supplies, make periodic statements of the condition of the store-house, submit weighed monthly inventories, be responsible for the cleanliness of the kitchen and the help.

All the food for the 17 schools is prepared in 5 such central kitchens, with 11 associate managers in command, whence the food is distributed to the 12 associated schools. In each associate school there is an associate manager who is immediately responsible to the central kitchen manager for the collection of pennies and the orderly operation of the lunch service.

Through the Food Bureau of the Association we have been enabled to inspect various establishments from which we secure food at a saving of 25 per cent, and are assured that the supply is pure and free from harmful substances.

The Committee has established a system of accounting whereby it is enabled to keep track of the cost of each process in the operation of providing lunches, without laborious examination of the books.

All the menus are prepared by the supervisor. Foods are chosen with special regard to the nutrition contained in them. The variety of foods which we are enabled to offer at one penny a portion is impressive.

A compilation follows:

Soups

cream of tomato
tripe
macaroni
vegetable
Scotch broth
split pea
clam chowder
rice
potato
potato and barley
cabbage
lima beans and barley
rice and lentils
peas with noodles
pea beans with rice
rice with milk
obergritz with potatoes
noodles with milk
macaroni and tomato
peas and rice
lentil
beans and pasta
menestra
rice and tomato
peas and pasta

Salads

potato
tomato
cabbage
lentil

Sandwiches

jam
egg and onion
lettuce
meat and bologna
pot cheese
bologna
American cheese
butter
radish

Other dishes

corn meal pudding
bread fritters
rice pudding
chocolate pudding
bread pudding
apples
apples on stick
apple sauce
baked apples
apple pie
prunes
sliced bananas with milk
grapes
cocoa
crackers of all kinds
jelly cake
vanilla cake
sweet chocolate squares
ice cream

The problem of transporting the food from the central kitchen to the associated schools is a vexing one, but we hope during the next term to install an automobile delivery system which will deliver the food to the schools promptly and with despatch.

At 11.45 in each school a squad of picked pupils set up the tables and prepare to serve the children. The children come from their class rooms, form lines, and as they pass a given point take up a tray, a spoon, and whatever other utensils are necessary. The inflexible rule has been to have each child purchase a half-pint bowl of soup with the first penny, after which there may be purchased any of the items which appear on the table for that day. After receiving the soup the child passes along the table on which the other items of food

are placed. Behind these tables the picked pupils, in white gloves, aprons and caps, hand to the children the food which they wish to purchase. At the end of the line the associate manager stands to receive as many pennies as there are items of food on the tray.

We have taken every possible precaution to minimize the handling of the food by the naked hand. We feel that this is imperative, not alone as it affects the child to whom the food is delivered, but also as it teaches the child the sanitary handling of food in the home.

In order to obviate any possibility of disease transmission in the preparation and handling of food, the Committee asked the Department of Health to make a thorough medical examination of its employees to ascertain whether they were free from disease and the possibility of being disease carriers. Each employee submitted to a stripped examination, throat cultures also being taken for diphtheria bacilli and blood tests being made for typhoid. As an added precaution, facilities for free vaccination against smallpox were offered to each employee who had not been vaccinated within the past three years. This is the first movement of its kind in school lunches taken in this country or abroad, and it is a distinct forward step in preventing school epidemics through food contamination.

The administrative officers have delivered a number of public addresses on school lunches, and have represented the Committee at numerous conferences. The most important are those delivered in the nature of little informal chats with mothers at parents' meetings.

The appeal which school lunches have made has been manifested in more than one instance by mothers who have come to our kitchens to inquire how to prepare the foods which their children have eaten in school, and this help our employees are always willing to render.

During the summer our supervisor was at work, in coöperation with the Cornell Laboratories, upon the standardization of recipes in order to insure uniformity of food value in the portions served. This is one of the most important steps, in so far as it will enable us to determine in terms of caloric value the benefits which a child might reasonably expect to receive from the consumption of our foods.

There is nothing constant about the number of children who purchase food. Rain invariably increases the attendance while on a beautiful day the attendance is perceptibly reduced. The average daily attendance at our tables in 17 schools during the current year has been 3,337, compared with 1,721 in 9 schools last year.

The splendid ground-work laid by the school lunch movement in

past years in New York City is commencing to show its fruits through an increasing recognition on the part of the children that the lunch room provides better food than the street vendor. This is shown by the increased receipts this term in the schools operated the year previous.

	RECEIPTS	NUMBER OF DAYS OF LUNCH SERVICE	AVERAGE RECEIPTS PER DAY PER SCHOOL
1913-14.....	\$7369.07	1321	\$5.58
1912-13.....	6011.37	1261	4.77
Increase, 1913-14.....	\$1357.70	60	.81

A careful analysis of the costs has justified our experiment in the central kitchen field. A comparison of the costs this and last term in the schools operating during those periods shows a net saving of \$.0019 per portion on labor costs alone.

Through enlarging the field of work and concentrating the preparation and administration we have been enabled to operate 17 schools, serving 1,249,489 portions, at a net deficit of \$4624.52 or \$303.58 more than it cost to operate 9 schools the previous year.

Our aim has been to provide for school children who are unable for any reason to procure a warm, nourishing meal at home, a hot lunch at the lowest possible cost. Inasmuch as there are numbers of children who are suffering from malnutrition, which impairs their future mental and physical growth, it is our purpose to demonstrate to the city authorities the social, economic and educational value of a school lunch scheme. There is need for a wider extension of this work than it is possible for our Committee to enter upon in the immediate future. It has been our aim to show to the school authorities that this is their function; that it is being performed by private agencies merely to approach, at an earlier date than is otherwise possible, the transfer of this work to the Board of Education as an integral part of its duties.

It is proposed to organize one additional central kitchen in the crowded lower East Side where 6 schools might be served, with a total registration of 11,464 children. If approved by the Committee, the lunch service will be available to a total of 44,833 school children.

In order to engage upon this further widening of the work of the Committee, we are asking the Board of Education to include in its

budgetary request for 1915 an item of \$6339.39 to repair and equip schools for our existing and proposed services. We have the assurance already of the Committee on Care of Buildings that this sum of money will be included in its budget.

HOUSEWORK, ENGLISH AND IMMIGRANTS

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Why not apply the vocational school idea to training immigrant girls for housework? Such a plan, if it could be carried out, might help in the Americanization of the next generation of foreign families. They need a better knowledge of the customs and habits as well as the languages of their adopted country. Miss Balch makes some interesting suggestions along these lines.—*Editor*.

This brief paper is merely to discuss one of those experiments, more or less costly in time and money, that occur to one as very interesting—for some one else to try.

The problem is, on the one hand, the newly arrived immigrant girl, knowing no English and sometimes used more to field work than to kitchen work and quite ignorant of plumbing and urban customs, and, on the other hand, the American household with all its complexities and perplexities.

When, as may happen, the young foreigner falls into the hands of a good housewife who does most of her own work and who is kindly and also skillful in teaching the language and the ways of the new country, this is the simplest solution of the question and the best, except for the strain on the housekeeper and the lack of companions of her own age to learn with, of the one taught. It must be remembered, too, that to teach one's own language is an extremely difficult art—as all know who have suffered at the hands of unskillful foreign teachers. The more unconsciously the language is spoken, the greater the difficulty of giving helpful explanations and general directions. Neither is it easy to teach about household matters sensibly, interestingly and effectively. The capacity to do both things in one is none too easily secured.

But too often the newcomer who goes into housework finds the roughest places and the hardest usage, learning poor English, undesirable methods and sometimes bad morals. She needs to be taught English and helped to a proper situation.

Might not a half time system be worked out here, as it has been in some types of trade training? Suppose that either the morning or afternoon were devoted to learning English and housework, the one through the other, in a school under good teachers and according to the best methods, and that the other part of the day were spent in practising what had been learned, in a paid job of scrubbing, dusting, washing or preparing vegetables for dinner in a restaurant or helping take care of children in a day nursery?

Alternate days of work and teaching might be found more convenient or even alternate weeks. Again it might be practicable to pair the girls, as is often done in vocational training divided between school and work-shop. In Fitchburg, Massachusetts, for example, one boy is at school while the other is working in the machine shop from Monday to the end of the week; Saturday afternoon the boy who has been in the shop explains the job, in which he is engaged, to the other so that he can continue it without interruption and the next Monday they exchange places.

A better modification might, perhaps, be evening schools, where, as has been suggested, English should be taught through the medium of household activities, from the care of a stove to the care of a baby, from marketing to answering the telephone. This would leave the day free for wage earning, though care would have to be taken not to make the regime too severe for the health and spirits of the girl.

Of course we already have evening schools for training in household arts, though not so many nor so adequate as we need. Evening classes especially designed for teaching English to foreign women and girls, we also have though, again, not so many nor so good as we should like. And there are, of course, the various training courses for domestic service, carried on by Young Women's Christian Associations and other groups.

The question raised here is whether there is not a place for a modification of these, such as has been suggested. Perhaps some girls who, on arrival, would be glad to try housework but who are not then available for the kind of place which alone could hold them, might find an opportunity in this way. Perhaps some classes of immigrants, for instance Jewish and Italian girls, who now do not consider housework an eligible employment would do so if they could enter it through the school room and could go to places where their self-respect would be guarded and where the vocational school would keep in touch with their progress and treatment.

The difficulties are obvious. Would there be girls who would care to begin in this way, and if there are, how find them? Would there be employers who would find it worth while to use this kind of help?

Such an experiment as is here discussed could be worked out on a small scale by one competent and friendly woman with small expense of anything save time and trouble, or it could be tried out by some committee or larger organization, or by the school authorities.

The common impression that immigrants arrive wholly at loose ends, without any affiliations whatever, is a mistaken one. The vast majority come to relatives or friends and the way to reach newcomers is less on the dock or at the depot or in the home for immigrants than through "the colony" and those of the group already in town.

Therefore if a committee is formed either to carry on such an experiment or to act in an auxiliary or advisory capacity to it, it would generally be highly desirable to get a priest or rabbi or other trusted representative from each of the nationalities concerned to serve on the board. Their knowledge of the situation will be needed, they alone can secure the kind of publicity essential to success, and their presence will give standing to the enterprise among their own people and will induce confidence.

It is much to be desired that anyone knowing of successful attempts in this field should report them, for the benefit of others interested, to this JOURNAL.

KANAHOAH, THE HOUSE OF FRIENDS¹

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The highly specialized equipment used in our fine public schools leaves so little to the imagination and is so unlike that used in any cooking process in the student's own home, that there is a tendency to regard the lessons as something belonging entirely to the school, and having no more connection with the home life than algebra or Latin. Unless something is done to give the home lessons in an environment or with an equipment somewhat similar to that in her own home, the average young student is mentally incapable of making the application of the lesson as it should be made.

¹ See Frontispiece.

For this reason we are advising the Agricultural High Schools and other schools in the South to offer their Home Economics work in small, separate cottages. These cottages, simply planned and built of the material most in use in that particular locality, offer a proper setting for the home making courses and an arrangement more easily imitated than a set room in a large school house. These cottages have a school kitchen where the class work is given and some have a small kitchen fitted up as a home kitchen should be; a dining room; a sewing room; a sitting room which is often combined with the dining room or sewing room; a small bed room and bath. The furnishing and care of this house is part of the regular class instruction, and, although it is of course necessary to teach both cooking and sewing in a special class room, the student may easily find suggestions in this house for improvement in her own home.

With this end in view, that is, to make our Home Economics courses more vital and more easily applied in the home of the students, our practice home was planned and realized.

As we had two large cooking laboratories with dining room, reading room and other rooms we decided to make this house a real home where a certain number of students could live for a certain length of time; do all the work of the house and share all its comforts.

It was decided from the first that in building the house the students themselves should do all the work of construction possible for girls to do. After a consultation of the coöperating departments of Applied Design and Home Economics, it was decided that an eleven-room house accommodating ten girls and an instructor should be built. This was to be of brick veneer and was planned to harmonize with the prevailing architecture on the campus.

The problem of drawing plans for this house was submitted to the home art classes in the fall of 1912 and after careful thought and study, each student submitted her plan of the house proposed. The plan best suited to our needs was then selected and carefully revised so that every room in the house should have cross ventilation; that there should be no dark corners; that all the bedrooms should have closets; and that all the rooms should obtain the sunlight at some time during the day.

The plan was given to a young builder employed by the college who undertook to put it up with our coöperation. Owing to our ideal of the work and to a scarcity of funds, we did not attempt to put the work into the hands of a regular architect or contractor.

During the entire construction the students were constantly present and consultations in regard to the size of pillars, porches and other details of the house were held. The interior of the house was completed entirely under the supervision of the Art and Home Economics Departments, assisted by the president.

Our Practice House which we called *Kanahoah* or the *House of Friends*, stood complete at the beginning of the session of 1913-14 but with all interior woodwork and walls to be finished and with the furniture to be selected. This decoration of the House became the problem of the senior class in Home Economics. The Home Economics work at the Mississippi College is now given as an elective during the junior and senior years with certain pre-requisites required before beginning the junior year. The junior classes have work in elementary food preparation, household chemistry and home art in connection with certain literary branches.

The senior students have advanced food preparation, elective courses in household management, home decoration and dietetics. The house belongs to the senior class and it became their problem to make the interior finishes in application of their courses in home decoration. This same class was to live in the house later on and put into practical use the cooking and dietetics courses.

In preparation for the decoration of the house the methods of finishing woods, floors and walls was made the subject of class lessons. These lessons were then applied in the house during laboratory hours. The interior woodwork was finished in as many different ways as was consistent with a harmonious whole. We have some rooms finished in oil stain, some in alcohol and some in water stain. All the stains, with the exception of the alcohol stain, were made by the instructor, and students and colors were blended to suit their taste. During application, the suitability of the different finishes to pine was discussed and it was decided that the best results were obtained from the oil stain. Some of the bed rooms, the bath rooms and dining room are done in white enamel. Oil stain is used on all the floors and these are finished with various types of varnish and then waxed. On all the other stained wood work a flat wood finish was applied. A summary of this work was made at the end of the year and the wearing quality and ease of cleaning of the different finishes discussed by girls who had the experience of living in the house. It was interesting to see how their ideas had changed after they were obliged to clean the woods for some time.

The walls offered a big problem and their treatment was not wholly a success, owing to the lime in the plaster. These were painted with flat tone washable paint and different colors were used with reference to the location of the room. For instance, the dining room which has a part northern exposure is treated in golden yellow with white woodwork and is generally considered to be the most attractive room in the house.

After the interior of the house was complete the furnishing was attempted. For the bed rooms, high iron twin beds were provided and a very neat little Princess dresser in oak, with straight chair and rocker to match, were ordered from the factory in an unfinished state. These were then stained and waxed or enameled to match the different rooms, the oak, of course, offering a different problem from the pine woodwork. The living room, dining room and kitchen furniture was ordered from catalogs, the students helping to make the selections and keeping a careful account of cost and styles. The hangings were then selected, the cost estimated and the work of hemming and finishing done by the students.

During the session of 1914-1915, it is intended that every senior electing the Home Economics course, shall live in the Practice House for six weeks, and receive one unit of college credit for the work done during this time.

The work of the house is divided into ten duties and these duties with their exact requirements are posted on the wall in the pantry so that every girl may know exactly what is required of her. The planning of meals, ordering, cooking and serving of food, keeping accounts, cleaning and managing the house are all done by the girls with the advise of the instructors.

About one-half of the groceries are bought from the college dormitory and one-half from town markets in as large quantities as possible for use. When the groceries come to the kitchen the cook looks over them and puts her O. K. on the order before it is filed.

The housekeeper keeps strict account in the card catalog, and at the end of the month the cards are all compared with the grocers' checks and bill. If correct, they are then handed to the college secretary for settlement. In this way the students get the actual practice in buying but do not handle any of the funds. The per capita allowance of \$2 a week has never been fully spent, as \$1.80 has been the largest amount so far.

The college Horticulture Department has coöperated with us, and

last year furnished us with celery, lettuce, parsley and other green vegetables throughout the winter.

This year one of our students who belongs to the girls' canning club of the State is putting up large quantities of tomatoes, peas, beans, corn and fruit. We have arranged to buy this from her at the regular wholesale price.

Once during each housekeeper's term of office the dinner is served without a maid. On this day the housekeeper comes in and carefully plans all the courses, arranges the dishes on the rolling tea table which she places at her left. The maid and cook take their places with the family and the lady of the house rises to remove the soiled plates after each course.

The kitchen is well arranged so that the dishes are cleaned and stacked, washed, dried and put away within a small walking circuit.

The dish closet opens from the back into the pantry and from the front into the dining room so that the dishes are put away and removed very easily.

A small gas stove is used in preparing the breakfast and lunch, but a coal range is always used for the dinner so that the students may learn the management and regulation of a range. It is planned next year to put in a good, small dish washer and in this way lighten the labor of the cook and maid.

A small laundry and dairy were built during the present session and will be equipped during the coming year. It is planned to put in modern labor saving devices such as any farmer or housewife will find it possible to afford. Lessons in laundry and care of milk and butter will be given in connection with the work in the Practice House.

As our name Kanahoah indicates we have made every effort to give this house the atmosphere of home. The big living room always has a cheerful fire on winter days; we have a victrola and a piano; friends are always welcome and on Sunday afternoons we are at home and tea is served. The student who is then lady of the house acts as hostess on all these occasions and the living room maid acts as butler to receive the guests and serve any thing needed.

The students are most enthusiastic over their life here and look forward most eagerly to the time for their residence in Kanahoah. In spite of the fact that all lessons continue and that their work is almost doubled, there is never any complaint. The good that it will do in the future can scarcely be estimated. A simple and artistic house; plain softly tinted walls; softly finished woods; attractive and

artistic rugs, hangings and furniture; and flowers which our climate always allows, cannot fail to have their effect upon those who enjoy them daily. The fact that the girls helped to do this house, that it is partly the work of their own hands, and that it all costs so little, renders it possible for everyone to someday embody this ideal of simplicity and beauty in her own home.

This they all expect to do, as is evidenced sometimes by spoken word, sometimes by their faces, and always in their thoughts they plan to some day see the fulfillment in their own homes, of all that they found attractive at Kanahoah.

WHAT FEDERAL MEAT INSPECTION HAS DONE FOR THE COUNTRY

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The fundamental object of federal meat inspection is to protect the people against the use of diseased or unwholesome meat. Notwithstanding the far-reaching nature of the federal law, there are a great many misconceptions as to its application. The Federal Government can take account only of the meat that enters into interstate commerce. It cannot control the meat originating within a State and sold within the borders of that State. This is a fundamental weakness that must be corrected either through uniform state laws or through coöperation between the federal authorities and the state authorities. A great deal of meat that is wholly unfit for food is sold within the State simply because the State cannot or will not enforce the law. Public conscience, however, is being aroused, and reforms are taking place as rapidly as the people will support them. Much harm has been and is being done to the cause of wholesome meat and pure foods by the almost fanatical demands of a comparatively few persons who know or care little about the real situation so long as they can place themselves in the center of the limelight. True reform can come only as a result of patient work, and in strict conformity with scientific and economic truth.

During the past eight years, since the food inspection law has been in active operation, something over three hundred and seventy-eight million animals have been inspected. During that time one and

one-half million whole carcasses have been condemned. There have also been condemned nearly five and one-half million parts of carcasses, and in addition one hundred and eighty million pounds of meat and meat food products have been condemned on reinspection. This enormous quantity of meat unfit for food was thus removed from consumption. It is safe to say that without inspection most of it would have been sold and eaten.

I. Some of the dangers from which inspection affords protection are as follows:

(a) Diseases transmissible from animals to man, or as to which there is reason for apprehension that they may possibly be so transmitted, such as anthrax, tuberculosis and cancer. Anthrax is highly dangerous and is easily transmitted to man. Tuberculosis is not so readily contracted from meat as from milk, but is very prevalent and is a source of some danger. Less is known about cancer, but there is some reason to suspect that it may be contracted from eating cancerous meat.

(b) Parasites transmissible from animals to man, such as tapeworms and trichinae. Even with careful inspection it is impossible to afford absolute protection against trichinae in uncooked pork, therefore no special inspection is made for these parasites and thorough cooking is recommended as the most effective precaution. But in the case of tapeworms the inspection as now made, in the light of recently acquired knowledge, is believed to be an adequate safeguard.

(c) Diseases, parasites and conditions which, while not directly transmissible to man, are likely to cause more or less serious illness in the nature of ptomaine or toxic poisoning, digestive disturbances, dysentery, et cetera. In this class are the septicemias and other conditions.

(d) Effects similar to the foregoing that may also be brought about by contamination of products as a result of insanitary conditions and methods of preparation, which are not permitted under the inspection system. In this class are the germs of filth and decomposition, which generate toxins.

(e) Preservatives, dyes, et cetera. Some preservatives may be directly injurious to health, while some enable an unscrupulous dealer to conceal dangerous conditions in meat, as, for instance, to give an appearance of soundness to meat that has partly decomposed and is impregnated with toxins. All harmful chemicals are strictly excluded under inspection.

The inspection performs a service of special importance in protecting the consumer against dangers that he cannot detect for himself. Some of the grosser diseased conditions would be apparent to the purchaser of meat in the piece, while other dangerous conditions would never be noticed except by an expert. But when meat is finely cut up, as in sausage, it is a matter of impossibility for the ordinary purchaser to detect disease or danger. It is therefore highly important that there should be an efficient inspection of all ingredients entering into the composition of sausage, before they are chopped up; and this safeguard is provided by the federal meat inspection.

The meat inspection also has a certain esthetic value in that it condemns meat that is merely repulsive or repugnant to the senses without being actually dangerous.

II. The federal meat inspection helps to conserve the country's meat supply. The public interest demands, on the one hand, that no unwholesome meat shall be passed for food, and on the other hand that no safe and wholesome food shall be wasted. While the inspectors rigidly condemn everything that is bad, and their instructions are to give the consumer the benefit of every doubt, careful discrimination is used so as to avoid ruthless waste of good meat. For example, a carcass affected with generalized tuberculosis is entirely condemned, but in certain slight cases of tuberculosis the meat is passed after the affected glands or organs are cut away and condemned. In these slight cases the wholesomeness of the meat is in no wise impaired. Under the new regulations provision has been made for utilizing a class of meat that has heretofore been rendered into lard and tallow.

III. Other economic results of the meat inspection are the prevention of fraud in labeling, and the tracing and eradication of diseases and parasites. The inspection gives no indication of market grades, but it does prevent miscellaneous trimmings from masquerading as "potted ham," and domestic goods from being given a label indicating that they are imported. With the aid of the inspection service it is possible to trace the origin of animals found affected with contagious diseases or with parasites, so that measures may be taken for eradicating the disease or parasites from localities or farms.

IV. The meat inspection has a certain commercial value; indeed, in the beginning the object was commercial rather than sanitary. The inspection is necessary in order that our meats may be accepted by certain foreign countries. In years past a large volume of export

trade was made possible only by inspection. In recent years, however, with the domestic meat shortage and the increased home demand, this export trade has declined.

V. The science of meat inspection has been extended. New light has been thrown on certain animal diseases and parasites in their relation to human health, so that the inspectors may know where to draw the line with safety.

In general, the inspection has brought about great improvement in packing-house construction and methods. Defects and abuses have been remedied and abolished.

THE INFLUENCE OF GLUCOSE ON THE COOKING TEMPERATURES OF CANDY SYRUPS¹

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The usual ways of determining when candies are sufficiently cooked are first, by testing the consistency of the mixture by cooling a few drops in cold water; second, by means of the thermometer, the temperature of the boiling liquid indicating the degree of concentration.

In looking over a series of recipes for caramels it was found that the cooking tests according to the cold water method of testing are apparently the same, namely, the formation of the hard ball in cold water, but the temperature tests for the different mixtures varied considerably, the range being from 116° to 132°C. For example, the ingredients used in one recipe are as follows: two tablespoonfuls of butter, one-half cup of milk, one-half cup of sugar, one cup of molasses, four squares of chocolate. Directions are given for cooking this mixture to the "brittle" stage when tested in cold water. A table of cooking temperatures for candies in the book from which this recipe was taken does not state to what temperature sugar syrup should be cooked in order to be brittle; hard ball is given as 120°C., small crack as 132°C.; presumably brittle should be interpreted as somewhere between 120°C. and 132°C. This mixture, however, when cooked to 116°C. formed the typical caramel. Another recipe for caramels calls for two cups of brown sugar, one-half cup of milk, one-eighth cup of molasses, one-fourth pound of chocolate. This mixture is to be cooked to 123°C. Other mixtures are to be cooked to 120°C.; and several were found which gave directions for cooking to 116°C.

¹ See also page 482.

The consistency of typical caramels is familiar to most of us. These candies should be firm enough to hold their shape at room temperature and yet should be "chewy." This consistency, if we may draw conclusions from the examples cited, is evidently attained by cooking the various mixtures to different temperatures, or else there is a varying standard for these candies, a theorem which is untenable.

A careful examination of the proportions of ingredients given in the different recipes suggests that there may be some relationship between these and the temperatures to which the mixtures should be cooked in order to produce the desired results. One recipe calls for much milk and butter in proportion to the amount of sugar, while others use more molasses, or glucose, or chocolate. In order to find out what factor or factors influence the temperatures to which these mixtures should be cooked the following investigation was undertaken.

Two typical recipes for caramels were used.

Caramel mixture I

2 cups sugar
1 cup glucose
3 cups cream

Cook to 116°C.

Caramel mixture II

1 lb. brown sugar
 $\frac{1}{4}$ lb. chocolate
 $\frac{1}{2}$ cup milk
 $\frac{1}{2}$ cup butter
 $\frac{1}{2}$ cup molasses

Cook to 123°C.

Caramel mixture II was cooked as directed to 123°C. The result was the typical caramel, firm but "chewy." Caramel mixture I cooked to 123°C. At this temperature the syrup was brittle when tested in cold water; the resulting candies were much too hard. When the mixture (Caramel I) was cooked to 116°C., the temperature stated in the recipe, typical caramels were produced. The difference in these two recipes, it will be noted, consists, first, (Caramel I) in a larger proportion of glucose to sugar as well as in a larger proportion of liquid (milk); second, (Caramel II) in less glucose (molasses), and less milk, and the addition of chocolate. Caramels were made from recipe I by substituting water for milk, the temperature to which these were cooked being the same as in the former experiment. The flavor and appearance of these candies were somewhat different from those which were made with milk, but the consistency was the same. Caramels were made from recipe I to which six ounces of chocolate were added; these were cooked to the usual temperature, 116°C.

The resulting caramels were typical. Neither chocolate nor a large amount of milk had any influence on the cooking temperature of caramels.

The large proportion of glucose, in caramel mixture I, suggested that this might be the cause of the lower cooking temperature; therefore, candies were made from recipe I in which one-half the amount of glucose was used. These were cooked to the same temperature, namely, 116°C. Others were made with no glucose, the proportion of sugar to cream being the same as in the previous case. Those in which less glucose was used were distinctly softer; those made with no glucose were too soft to hold their shape and lacked the characteristics of caramels. From these results we may conclude that when glucose is used in caramel mixtures a lower cooking temperature is necessary to produce the proper consistency.

In order to test this point further a series of experiments were carried out to determine the temperatures of glucose syrups of different consistencies. A mixture of glucose and water was cooked to the temperatures given for sugar syrups; trials of the glucose syrup were made at these temperatures by means of cold water tests in order to compare them with the standard sugar syrups at these same temperatures. Different proportions of glucose and sugar were similarly tested. The results are summarized in the following table.

Boiling Temperatures of Glucose and Sugar Syrups of Different Consistencies

AMT. OF GLUCOSE	AMT. OF SUGAR	SOFT BALL	HARD BALL	CRACK	HARD CRACK	BARLEY	CARAMEL
		<i>temp. °C.</i>	<i>temp. °C.</i>	<i>temp. °C.</i>	<i>temp. °C.</i>	<i>temp. °C.</i>	<i>temp. °C.</i>
1 cup		109	114	120	122	128	133
1 cup	1 cup	111	116	122	125	138	142
1 cup	2 cup	112	118	125	135	141	145-150
	2 cups	113	122	132	145	149	154

It will be noted that a syrup made of glucose and water will form a hard ball when tested in cold water at 114°C., whereas the hard ball stage of the sugar syrup is reached at 122°C. The "crack" in the glucose syrup is reached at 120°C., while the sugar syrup does not crack when tested in cold water until the thermometer registers 132°C. Equally striking is the difference between the barley temperatures of the two syrups, one, glucose, forms barley at 128°C., the other, sugar, at 149°C. Glucose begins to caramelize at 133°C.

while sugar caramelizes at 154°C . The trials made with mixtures of sugar and glucose were found to vary directly as the quantity of glucose used; syrups made with the larger proportion of glucose in each case gave the characteristic tests at the lower temperatures.

The temperatures for the different consistencies will vary somewhat according to the standards of the individuals testing. Yet the personal equation cannot explain the wide variations shown in the table given above. No two people can differ in judgment to the extent of twenty degrees in determining when the caramel stage is reached, nor will the opinion of two people vary greatly as to the difference between the hard cracked stage of two syrups. Our table shows that glucose syrup reaches the hard crack stage at 122°C ., while sugar syrup reaches this stage at 145°C .

It is obvious from these results that we must revise our temperatures for candy cookery. The tables of temperatures as usually given are intended for candies in which cane sugar is the principal carbohydrate present. When glucose is used in significant quantity lower temperatures give the desired results. By means of the above table cooking temperatures for typical candies in which glucose is used can be easily determined.

SCORE CARDS

INGA M. K. ALLISON

In the judging of culinary projects there is great diversity of opinion as to what constitutes an excellent loaf of bread, a glass of perfect jelly or a good cake, as the case may be. This is explained in the fact that we have set up so few definite standards of what to expect. Our likes and dislikes often affect our decision to the exclusion of judgment that should result from thoughtful consideration.

The score cards to follow have been prepared as a tentative standard to vary from and as a means of calling attention to the essential points that go to make up quality. It should be understood that they are not presented as the only acceptable standard. Knowledge and individual theories may lead one to attach different values to the points mentioned. These score cards have been formulated by the Department of Home Economics at the Colorado State Agricultural College for use in the College classes and in judging at fairs. In each case the total score for perfection is 100 points.

Score card for bread

	Points	Points
General appearance.....		15
Color.....	5	
Shape.....	5	
Size.....	5	
Flavor.....		40
Crumb.....		40
Texture.....	10	
Lightness.....	15	
Moisture.....	10	
Color.....	5	
Crust.....		5

General appearance. In color the loaf should be a uniform golden brown; in shape, oblong; in size, about 9 by 4 by 4 inches.

Flavor. Agreeable to taste, nutty, and with no suggestion of sourness.

Crumb. Lightness—well raised, light in weight in proportion to size, of small even grain, absence of heavy streaks. Texture—tender in crumb, yet not crumbling when compressed. Moisture—slightly moist, yet rebounding when compressed. Greater weight is attached to flavor and crumb because of their importance in making up the perfect loaf.

Crust. Tender, of medium thickness.

In rolls it is not to be expected that crumb can have the same consideration that it does in bread. It is therefore given only twenty points. Since rolls are served uncut, more importance is attached to appearance, giving it twenty-five points.

Score card for cakes

	SPONGE CAKE	BUTTER CAKE	FRUIT CAKE
	Points	Points	Points
General appearance.....	15	15	15
Color.....	5		
Size.....	5		
Shape.....	5		
Flavor.....	30	40	40
Crumb.....	50	40	40
Texture.....	15	10	10
Lightness.....	20	15	15
Moisture.....	10	10	10
Color.....	5	5	5
Crust.....	5	5	5

In the card for cake it is understood that cakes are not frosted. Sponge cake includes angel cake and yellow sponge cake—in both of which egg white, not baking power, is intended to be the leavening agent. The terms butter cake and fruit cake are generally understood.

If cakes are iced or frosted 10 points are given to icing (texture 5, appearance, 5), and in the cake score card color and crust are omitted.

General appearance. In color sponge cakes should be light brown; butter cakes golden brown; fruit cake dark brown; but all should be of uniform color. Sponge cakes should be thick, and round or oblong and should round up slightly on top. Fruit cakes should be level. No cake should be too thick to cut to advantage for serving. Cakes of medium size are most acceptable.

Crumb. Texture—tender in grain, break easily and show no sign of doughiness. Lightness—to be graded as excellent, butter cakes must be light in weight in proportion to ingredients used; the grain in a rich cake must be small, even and uniform. Sponge cake must be tender, loose in texture and velvety. Fruit cake necessarily cannot be light but, on the other hand, must not be almost all fruit. Moisture—slightly moist, yet so that it will rebound when pressed with the finger; it is expected that fruit cakes must be more moist than the other types of cakes scored. Color—uniform; fruit cakes should show a decided brown color.

Crust. The crust of the sponge cake should be rough and slightly sugary, of medium thickness; of butter cakes, tender, smooth and not over thick; of fruit cake, rough and not very thick as is often the case.

In appearance icing should be smooth and glossy; in texture, spongy and not brittle so as to crumb when cut, nor so soft as to be sticky.

Score card for pastry and pies

<i>Crust</i>		<i>Points</i>	<i>Points</i>
General appearance.....			15
Color—degree and evenness of brown.....	5		
Thickness.....	10		
Flavor.....		35	
Texture.....		50	
<i>Filling</i>			
General appearance.....			15
Finish.....	5		
Thickness of finish.....	10		
Flavor.....		50	
Consistency.....		35	

To be of satisfactory texture pastry should be friable or flaky, this depending upon whether it is plain or flaky pastry. It should be free from toughness and be well baked.

FOOD VALUES OF DIETS IN BRITISH WORKHOUSES

MARY G. MCCORMICK

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A recent English report¹ contains rules for the management of workhouses in all departments. Only the regulations for dietaries are here considered. The explicitness characteristic of the phraseology in all British laws and regulations is well illustrated.

For the purposes of dietary administration, inmates are divided into four classes: adults (men and women), not infirm; infirm adults; children under the age of eight years; children above the age of eight years.

Lists of menus for breakfast, supper and dinner are made for each class of inmates. About twenty different breakfast and supper menus, and thirty-nine different dinner menus are given. The regulations specify that supper must consist of foods different from those served for breakfast, and there must be a weekly rotation of meals. An inmate who is doing heavy manual labor shall, with the approval of the medical officer, receive an additional meal every day.

The amount of each serving is expressed in ounces, and any inmate may demand that his allowance be weighed. Children are fed according to appetite and may have more or less than the prescribed ration. A stewed fruit is allowed once a week.

The regulations offer no information, however, about the food value of the rations served, and the purpose of this article is to present the number of calories and the amounts of protein, calcium, phosphorus and iron in the average day's food. As the amounts of food materials allowed for each recipe are specified in the report it is possible to calculate these values with accuracy. In this calculation the food of only one class of inmates was considered—that of adult men, not infirm. The foods may appear to be meager, but calculation of their dietary values indicates that they are sufficient in variety and

¹ The First Report of the Departmental Committee appointed by the President of the Local Government Board with respect to the Poor Law Orders. Presented to both Houses of Parliament by Command of His Majesty. 1913, pp. 1-89.

quantity to offer the elements essential for nutrition, and to furnish energy enough to carry on moderately hard labor.

Several menus for each meal were selected for study. The following tables show the food values of typical menus and the totals differ only slightly from those obtained from the entire study.

Composition of food materials

NAME OF FOOD	ENERGY	PROTEIN	CaO	P ₂ O ₅	Fe
	<i>calories</i>	<i>grams</i>	<i>grams</i>	<i>grams</i>	<i>grams</i>
Breakfast					
Bread 4 oz.....	293.6	10.51	0.045	0.45	0.00170
Porridge 1½ pt.....	679.2	27.36	0.221	1.48	0.00610
Tea { Sugar.....	56.0				
{ Milk.....	42.2	2.02	0.103	0.13	0.00014
Total.....	1071.0	39.89	0.369	2.06	0.00794
Dinner					
Mutton boiled 4.5 oz.....	306.0	31.8	0.020	0.619	0.00404
Pease Pudding 12 oz.....	644.4	4.4	0.238	1.578	0.00953
Total.....	950.4	36.2	0.258	2.197	0.01357
Supper					
Bread 8 oz.....	587.2	21.04	0.091	0.91	0.00340
Butter Milk.....	162.0	13.61	0.732	1.07	
Total.....	749.2	34.65	0.823	1.98	0.00340
Total per day.....	2770.6	110.74	1.450	6.237	0.02491
Extra meal for hard labor....	478	22.8	0.513	1.07	0.0017
Total for hard labor....	3248.6	133.54	1.963	7.307	0.02661

FOOD VALUE OF ASPARAGUS

Recent analytical work carried on under the auspices of the *Lancet*, London, shows that approximately one-tenth of the raw asparagus shoot is solid matter and of this as much as 70 per cent is soluble in cold water and 80 per cent in boiling water, the constituents thus removed consisting of sugars, gums, proteids, and practically all the phosphoric acid salts. The sugar in asparagus amounts, on an average, to 3.6 per cent; the proteids to 3.8 per cent; the fiber to

1 per cent; the fat to 0.5 per cent; and the mineral matter to 0.8 per cent.

The green variety contains much less fiber than the white, and the green also yields more soluble matter to boiling water and still more to cold water than the fat white stick yields. An important constituent of the tender shoot of asparagus is the basic body vitamin. This occurs in the growing tips of all vegetables, but particularly so in those of asparagus.

The botanical relation of asparagus to the onion family is pointed out, and it is stated that

When the tender shoots of asparagus are left in water for a few days the smell of onions quickly develops and after a time becomes very marked. Again, if asparagus is extracted with ether an oil is obtained which has a faint smell of the raw shoot. This oil, on analysis, proves to contain sulphur. It is probably this sulphur constituent which gives the well known peculiar odor to the kidney excretion after a diet of asparagus [methyl mercaptan], and not the other principle peculiar to asparagus, asparagin.

Asparagus, after boiling for 20 minutes, contains too little nutritive material to make it of any special importance as a foodstuff, though it is valuable as a pleasant adjunct to the meal, and so an undoubted aid in the processes of nutrition. Possibly the nutritive material extracted by boiling may be utilized in asparagus soup.

Vitamin, referred to above as existing in the young and tender shoots of asparagus, is a name applied to a substance or substances recently discovered and seemingly of great physiological importance. Vitamins are widely distributed in foodstuffs, being found in the branny portion of cereals, in beans, and many other foodstuffs. The nature and function of vitamins are being studied by many investigators and it seems clearly demonstrated that such substances are essential to normal nutrition and development, though some differences of opinion are expressed.

The whole subject first assumed prominence in connection with studies of beri-beri—a serious and often fatal disease which is common in the Philippines, Java, and other localities in the Orient among people whose diet consists very largely of rice supplemented by a little fruit, fish, and so on. It was finally shown that the disease was attributable to the use of polished rice and that the use of the unpolished grain or of rice bran—the portion of the grain which contains vitamin—would prevent and sometimes cure beri-beri. It was also learned that the disease could be prevented by adding to the polished rice diet other foods containing vitamin, for instance, beans, instead of rice bran.

How far the facts observed with rice apply to other cereals cannot be definitely stated at present but it has been claimed that a serious physiological disturbance is found among Newfoundland fishermen whose winter diet is made up of white flour supplemented by other foods of limited amount and variety. Whether or not the observed condition is attributable to the flour it is certainly the case that whatever the kind of flour selected such disturbances are not generally observed where the diet is varied. The fair conclusions therefore seem to be that if diet is made up largely of bread, it would be wisest to use flour made from the entire grain; that a varied diet is preferable to a limited one made up of a very few articles; that either kind of rice is wholesome in a mixed diet; and that with a varied diet one can use the breadstuff which seems to him most palatable, all sorts being wholesome under such conditions.

THE CHEMISTRY OF A CUP OF COFFEE¹

While coffee and tea infusions contain practically no materials of direct food value, except the small amounts of sugar or cream which may be added to them, they produce a stimulating effect upon the vital centers of the body and, by decreasing nervous fatigue, make us less conscious of the fact that we are tired, and thus enable us to do more work. This physiological effect is attributed to the alkaloid caffeine which they contain and if the use of coffee or tea is forbidden by a physician it is for the purpose of avoiding the effects of this substance. Therefore, it is of first importance in comparing methods of preparing these beverages to know the amounts of this principle extracted.

According to experiments reported in the *Lancet*,² while tea contains from 3 to 4 per cent of caffeine, and coffee seldom more than 1 per cent, yet, owing to the much smaller amount of the former used in ordinary household practice, infusions of tea and coffee contain practically equal amounts of caffeine in the same volumes of liquid. "The caffeine in tea is for the most part combined with tannin in the form of caffeine tannate, which is not very soluble in cold water but is easily soluble in hot water," while the caffeine in coffee is combined with an acid (called caffetannic acid by some writers) which has different chemical

¹ See also page 480.

² *Lancet* [London], 1913, II, No. 22, pp. 1563-1565.

properties from the tannin in tea and is readily soluble in both cold and hot water.

As the caffein tannate of tea is precipitated by weak acids and, therefore, probably by the gastric juice also, it is likely that the caffein in tea is not absorbed until it reaches the alkaline juices of the intestines, while the caffein in coffee, which is soluble in both acids and alkalis, is probably dissolved by the acid gastric juice and absorbed in the stomach. This fact is in harmony with the more rapid and powerful stimulating effect of coffee. While it is claimed that coffee removes drowsiness, in many cases it produces drowsiness which however is soon followed by marked wakefulness.

Although the analyses of hot and cold water infusions of coffee show that cold water extracts from coffee the same weights of caffein, caffetannic acid, and mineral matter as hot water does yet the cold water infusion is much less palatable and lacks the flavor and aroma which are the essential features in making coffee a pleasing beverage, and which the hot water infusion possesses. This is probably due to the fact that the oils and aromatic principles which impart these properties to the infusion are not extracted from the coffee by cold water. The physiological effects of a cold water infusion would probably be the same as those of a hot water infusion except for the importance of these esthetic properties.

Roasting of coffee is wholly for the effect on flavor. An infusion made with raw coffee has a flat taste and the coffee beans must be roasted, as the aromatic bases and oils which give the coffee its aroma and flavor are formed during the roasting process. It is evident then that these esthetic qualities of the coffee depend to a very great extent upon the care spent in the roasting. During this process there also occurs a caramelization, or formation of definite chemical compounds (brown in color) which are the products of partial oxidation of the carbohydrates in the coffee bean and give to the infusion its characteristic color.

EDITORIALS

Museum Collections and Home Economics. The recent report of the United States National Museum at Washington mentions a matter which is of interest to Home Economics teachers, that is, the growth of its art-textiles collection. The Museum depends for this collection upon the generosity of manufacturers, and its development is making available materials worth the attention of the textile teacher who visits the National Capital. There are other textile collections in the Fine Arts Museum of Boston, the Metropolitan Museum of Art and the American Museum of Natural History of New York, the Field Museum of Chicago and doubtless in many other museums which merit similar attention. Many of these collections also illustrate the history of costume.

Home Economics teachers in all fields should make use of local museums wherever possible; if such museums do not possess collections which illustrate food, clothing, and shelter, their directors might in many cases be interested to begin such collections. The City Museum of Milwaukee, for example, has developed a special service for the schools, by providing a lecturer and special exhibits to aid teachers who bring groups of pupils to the Museum as part of their school work. In New York, loan exhibits in natural history are sent to the schools. In St. Louis, the schools themselves have museum collections which are kept at a central depository and sent out to the schools on requisition; the teacher has a catalog of exhibits, and a delivery service brings the materials requested directly to her building. In England, the Victoria and Albert Museum at South Kensington sends loan exhibits to schools all over England and has thus become an important factor in the development of English technical education. In the United States the museum has not yet been developed as an educational agency and social-betterment institution to the extent that the public library has been developed in the last two decades. The museum has a great future, however, and Home Economics teachers should be interested in its development, should utilize its present resources and work for enlarged museum facilities. Briefly, a national museum policy, viewed from the standpoint of Home Economics, would provide:

1. Local museums in all communities, even in small villages (see account of Haslemere Educational Museum, in Vol. 2, Special Reports of English Board of Education), with collections not only of local geography and natural science, but also of industry and social welfare, including matters of food, clothing and shelter.

2. The circulation of loan exhibits from town to town throughout a state, thus utilizing the dynamic power of novelty, as has been done in tuberculosis, child welfare and other traveling exhibits; in the circulating art exhibits of Indiana and Minnesota; and to some extent in Home Economics exhibits, as in the railroad car exhibits of the agricultural colleges.

3. The use of local museums by school children, in part by visiting the museum, in part by sending loan collections from museums into the schools.

4. The loan of material to schools from central state museums or bureaus. The lantern slides loan of the New York State Education Department is a pioneer enterprise of great promise, and the Cornell University College of Agriculture is regularly circulating exhibits for town and county fairs. Every State should copy this service, and Home Economics teachers should assist in bringing the matter to the attention of the state authorities.

5. The development of school collections and school museums. (See the catalog of the Educational Museum of the St. Louis Public Schools, and especially the article on School Museums in Monroe's "Cyclopedia of Education".) Many Home Economics teachers have already started such collections, for example, a teaching collection of textile samples mounted on cards, each marked with name, price, quality and purpose of the fabric.

6. Increased appropriations for the National Museum at Washington so that it may furnish leadership in a program of museum expansion throughout the United States; and that it may enlarge its industrial collections and those concerned with social welfare as well as its science collections; the present exhibit in this museum which illustrates the development of artificial illumination, from the pine knot to the latest electric lamp, is typical of what a museum may accomplish in historical collections of interest to Home Economics teachers. Congress should authorize the National Museum to prepare loan collections and to provide, if feasible, a circulating service comparable with that of the English museums. The subjects of food, clothing, and shelter, with which the Home Economics teacher deals, would have an appropriate place in such a program.

The Home Economics teachers of the country can aid in realizing such a program of museum development and extension. Discover what are the present resources of your own school, community and state in the way of objective collections and loan exhibits, available for teaching, and utilize them in your own work. Raise the issue of more objective materials for teaching in educational meetings and bring the matter to the attention of local and state educational authorities. Stand for the museum not only as a community educational enterprise but as a recreative institution which under urban conditions has possibilities not yet commonly appreciated—the museum as distinctly an institution for family recreation.

The Journal a Monthly. Beginning with January 1915 the JOURNAL OF HOME ECONOMICS will be issued as a monthly. This decision has been made at the unanimous request of the members of the Council who are convinced, from a canvass of the situation, that the number of pages now furnished in five installments will be more welcome and better read in smaller monthly numbers. We are confidently assured that the growth in the subscription list will soon justify the additional outlay for furnishing the material in this form.

The Executive Secretary. Miss Anna Barrows of the staff of Teachers College has been engaged by the Council as Executive Secretary for seven months beginning February next. She will promote the interests of the Association in all possible ways. She may be addressed at Teachers College by clubs and local branches who may desire to make dates for addresses or to obtain help in organization. Miss Barrows, services will be given free of charge if her expenses are paid.

Material for Teachers. There is great need of teaching material in the form of charts, outlines, drafts, etc., exclusive of reading matter. Teachers who know of such material will do a valuable service by forwarding to the JOURNAL office sample copies or information as to where such material may be procured, mentioning whether the material is available for free distribution or for sale; also samples of anything of the sort which is valuable though not now available but which might be reprinted.

The JOURNAL will be glad to publish a list of such helps.

HOUSEKEEPERS' DEPARTMENT

The editors of the JOURNAL earnestly request assistance from the readers of this new department. They especially desire suggestions for timely topics on which information should be gathered; data either given directly or by reference to books and articles; and records of personal observation.

"Whoso shall teach me how to eat my meat and take my repose and deal with men without any shame following shall restore the life of man to splendor and make his own name dear to all history."

From Emerson's Essay on Domestic Life.

COÖPERATIVE BUYING

During the past year the editors of the JOURNAL have printed in every issue news of the starting and progress of experiments in the coöperative buying of food. The information has come to us through correspondence and has been verified by personal visits and interviews. There are at present five such enterprises in active operation on the eastern seaboard. Their methods are various, from the simple marketing club which has been so successful in Greensburg, Pennsylvania, to the perfected Rochedale plan, best seen in the store of the Coöperative Society of Montclair, New Jersey. See reports in the February and June JOURNALS.

In the following article will be found statements concerning the movement in England by Mr. Straus, the president of the Society of Thrift who, during the past summer, made a careful study of co-operative stores in that country. There is certainly nothing the matter with the coöperative principle nor with its working out in other countries, but it must be remembered that the English housewife who buys at a coöperative store is following a custom started by her grandmother and made into a family habit by her mother. No general success in this line can be expected in our country until intelligence as to the principles has resulted in a new attitude of mind, a new view point of social and economic relations. This will not be brought about in a day.

For the guidance of those who wish to experiment in coöperative buying the following suggestions are made:

The first requirement is a group of people enthusiastic and intelligent as to the principles of coöperation. Their first step would be to unite ten or more families for buying at wholesale, the food being distributed from some central place. What is offered, in the way of low rates for shipping goods, by the parcels post and by the new produce department of the express companies should be investigated by such groups.

The financial and social experience thus obtained will furnish the only safe basis for a larger venture. The next steps would be learning at first hand the methods followed by existing stores and obtaining a local list of well-known, representative men and women who would stand back of the enterprise and promise to work as unpaid members of a board of managers to direct its policy. Then would come public meetings addressed by speakers who could set forth convincingly the social and economic principles underlying the coöperative store and the practical plans proposed. If, then, a canvass of the town results in subscriptions for the necessary amount of stock there is fair promise of success. One of the most enthusiastic coöperators in the country says, "Do not start a coöperative store until you have to," which means that there is little hope of success without a strong and intelligent backing.

To repeat: There is no educator like the small buying club; it can be safely started anywhere. Out of it may or may not grow the coöperative store. It may be said in passing that good speakers and good educational leaflets on this subject are greatly needed.

In the October JOURNAL a promise was made to report the result of coöperative enterprises in large cities, but, up to the time of writing, they have not been sufficiently worked out to give satisfactory reports.

THE ENGLISH WOMAN AND THE COÖPERATIVE STORE

S. W. STRAUS

President of the American Society for Thrift

During the several months I spent among the coöperative societies in Europe and from investigations made by our society in England and Scotland I found that women's efforts have been the most valuable feature in a great business or "movement" which is stupendous. The women members of the coöperative retail and wholesale societies have done wonders in promoting the sale of honest goods, those in which

deceptions, fraud, substitutions, adulteration, do not take dishonest toll. They have made coöperation a vital force in business in Britain. The victims of war will be distinctly aided by what the coöperative societies and the Women's Guilds have done.

As to the application of coöperative merchandising in this country, there is nothing but ignorance, prejudice and the prodigal spirit of the people to prevent its success. It is proven sound in principle. Whether its principles shall be applied in the United States remains to be determined. It is up to the people themselves. Like the cost of living it is determined by the thrift of individuals. So long as the spirit most in evidence is extravagance, a disregard of the pennies, the growth of coöperation will be slow.

In Europe the gains have been by leaps and bounds in recent years; the number of members of the British Coöperative Societies has increased at the rate of three hundred thousand a year. As for Europe in general, the leaven from the Rochdale idea had leavened a lump of seven thousand and fifty-three societies in 1910 with a total membership of five million one hundred and forty-three, representing that number of homes and families and probably twenty million consumers.

Do you remember that Bronson Alcott, Hawthorne, Emerson and others started in this country the Brook Farm coöperative scheme, which lasted only a few years? Brook Farm may have been founded on too much altruism and too little business enterprise. It also lacked the spur of dire necessity. In England that spur is never lacking and the phenomenal success of the coöperative movement in England is, after all, due to that fact.

One of the meetings out of which the great English Coöperative Wholesale Society arose, actually was held under a railway arch by men who had no other leisure to give for this purpose than their Good Fridays and Christmas Days. Of course, the wholesale society, as its name implies, was meant to be simply a market for the retail societies, in which they could buy without fear of deceit or false dealing or boycott and through which the small and the large buyer had equal opportunity to obtain pure and honest goods. But the nation-wide proprietors of each federation discovered that they could carry their unity a stage further by starting factories to supply their own organized market. Out of this discovery has grown the present interdependent chain of sixty productive factories owned by the English Coöperative Wholesale Society, employing twenty-three thousand workers in various parts of the country and producing goods to the

value of about eight millions sterling yearly—a growing factor in the stupendous total of merchandising by the Coöperative Societies.

The whole of this vast organization remains, however, entirely responsive under the democratic system to the two million individual working men and women coöperators whose weekly purchases are the basis of the whole. And although the women last year had gone only so far as to put a number of their sisters upon the management committees of retail societies, the number of women is rapidly growing; they come into direct relation with the wholesale society through buying its products under the society's brands and the annual meeting this spring showed that before long the women will hold many seats on the board of the wholesale federation. There is nothing in the rules to stop them, for this great movement is as entirely free and democratic as anything to be found between the Pacific and Atlantic coasts of America.

It is a common saying that the English "C.W.S" will supply any article from an elephant to a pin, and certainly on one occasion a store member in a dilemma not only got his furniture for his new home from the central warehouses of the federation, but, at an hour's notice, from amongst the clerks a gap in his wedding arrangements was filled by a "best man" also.

THE MATTRESS

HARRIETTE T. RICHARDSON

Two laws protect the purchaser of a mattress in the State of New York. The first governs the re-selling of mattresses and prevents hucksters from collecting and disposing of those discarded and left upon the streets or presenting them for sale in second-hand stores. The second law does not allow a shop to send out returned goods and has been in effect since January, 1914.

The essential difference between the feather bed and the mattress is the use of a narrow strip attached to all four sides and called the border. The border provides the mattress with an even height and is only $2\frac{1}{2}$ inches and unstitched in the cheaper mattresses, but as high as 6 inches in fine grades where as many as five rows of stitching hold the filling from bulging at the sides and keep the lines true and firm. In the more luxurious makes the edges are finished with the imperial roll border which requires from 5 to 10 pounds more filling than is the rule. This firm finish sustains the body pressure even to the edge of the bed.

Another point of difference between the feather bed and the mattress is the symmetrical tufting which creates an even surface and a non-breakable filling. In some instances lacing is used in place of tufting, allowing the mattress to be loosened or tightened at will. This method of obtaining an even distribution of pressure is recommended where the mattress is subjected to unusual weight and strain.

The tick is to be found in three grades. The heavy twill costing 28 cen's per yard, which requires no lining and wears indefinitely; the creton, 25 cents per yard and 18 inches wide which exhibits a wide choice of delicate colors, but is of limited wearing quality, and requires a lining adding \$4 to the expense; the linen, 65 cents per yard, and over 50 inches wide which affords daintiness in design and color, but requires an interlining at an additional cost of \$7.

Filling may be seen in nine distinct materials. They are straw, excelsior and wood shavings, corn cob, African fibre (a grass with unbreakable stems), tampico or shredded palm leaves, silk floss, cotton felt (to be found in two grades, the dark and the light), and most important of all, the three grades of hair—gray, black and white. Less commonly used in this country is lamb's wool in two qualities, the French and the American, which differs slightly in price, the imported being the more costly.

The combinations of African fibre with hair, tampico, white hair and cotton, the three grades of hair with cotton felt, and hair with lamb's wool, would seem to offer a bewildering choice. When, however, durability and resiliency are required the choice is easy.

In the first five grades and in the darker felt neither durability nor resiliency can be claimed. The life of the felting is short and it soon becomes matted.

The flaked cotton mattress is guaranteed for five years' wear, perhaps longer. It has been developed under different forms—tufted and untufted, and provides a clean and comfortable bed at a reasonable price. The tufted mattress receives the cotton after carding and combing and is built layer upon layer in felts which are pressed into position; while the untufted mattress is made by shredding the cotton, blowing it through a tube into the tick, and pressing with hydraulic pressure. The cost of these mattresses which may be bought with or without the imperial roll is from ten to twenty dollars.

The most important kind of filling is horse hair; and since hair has been brought from Argentina and Uruguay the hair mattress has come into common use.

The charge has been made that horse hair is unhygienic and a carrier of disease and that it is cut from dead and diseased animals. This is a mistake. The Vice Consul of Cordoba certifies that in the last thirty years the hair exported has been cut semi-annually from live and healthy horses. The fact that all leading hospitals and colleges prefer it to any other filling and that the United States Navy uses nothing else seems to vouch for its merit. The very processes necessary for its preparation are sanitary in the highest degree.

When received at the factories it is sterilized by boiling in water with chemicals to remove the natural oils, dust and vermin. The black, gray and white hairs of both mane and tails are separated, spun into ropes and boiled once more to set the curl. These ropes are allowed to stand for months, the longer the hair remains in the ropes the longer it will keep its spring. It is imported in ropes. The white hair is bleached and handled quite by itself.

When the tick is ready for filling the ropes are opened, handfuls of the springy masses are thrown into it and the mattress sewed and tufted. In renovation the process is nearly the same as in the original filling.

The cost of a pure hair mattress varies from \$23 to \$100. The weight is more variable than the price but averages within the limits of 25 and 40 pounds for a single bed and 35 and 50 pounds for a double bed. Many combinations of hair with other fillings are offered but sound judgment recommends the purchase of pure hair if only of the medium grade. In making a final decision it will be remembered however that for comfort the cotton mattress ranks with the medium grade of hair while its cost is hardly one-half. In durability no product out-ranks horse hair, as is shown by the fact that some hair mattresses have been known to keep their resiliency for over fifty years. If we give this fact due weight the hair mattress would be the cheapest.

MAYONNAISE DRESSING¹

From studies of mayonnaise dressing in regard to the process of emulsification of an oil and egg yolk, or substitute, together with flavorings; the variations of the substitutes and of the oils, and the resulting

¹ Extracts from *A Study of Mayonnaise* made by Margery Johnstone, University of Washington, Seattle, Washington.

variations in texture, color, flavor, the keeping qualities and the nutritive values and prices, the following conclusions are drawn:

As a base for the mayonnaise dressing, for the yolk of egg, there can be substituted successfully the white of egg, condensed milk, gelatin, beef extract and gum arabic. The emulsion will be as complete as the one made with the yolk, but the nutritive value will be decreased. At the usual prices the cost of a dressing made with gelatin or condensed milk will be one and one-half to two cents less than one made with egg yolk but the nutritive value will be less; with beef extract, or gum arabic the cost will be one and one-half to two cents more than one made with egg yolk, while the nutritive value will be negligible as compared to that of the egg yolk in the standard dressing.

For the standard dressing the following proportions were used: $\frac{1}{2}$ cup oil, 1 egg yolk, 2 tablespoonfuls acid (vinegar or lemon juice), $\frac{1}{4}$ teaspoonful salt, with paprika, mustard, cayenne, and sugar to taste.

In the other dressings the proportions were the same, but for one egg yolk there was substituted—1 egg white; 1 tablespoonful of condensed milk; $\frac{1}{8}$ teaspoonful gelatin in 1 tablespoonful water, heated to dissolve and then cooled to 70°F.; 1 teaspoonful beef extract with 1 teaspoonful cold water; $\frac{1}{2}$ teaspoonful powdered gum arabic in 4 teaspoonfuls water.

The oils can be interchanged with no difference in the texture of the emulsion and in nutritive value, but the cost will vary—cotton-seed oil being the least expensive tested, peanut next, and olive oil the most expensive. With most people no difference can be detected between olive oil and a good brand of cotton-seed oil when served on a salad. Some grades of peanut oil are not pleasing to the taste. Fine grades of peanut oil are of good flavor.

In quantity, the dressing may be increased to double its bulk without diminishing the flavor by adding a seasoned corn-starch of a consistency similar to the mayonnaise, or the white of egg beaten stiff may be used as a diluent.

The experiments show that a mayonnaise dressing made with vinegar instead of lemon juice is less liable to mold. Even if bacterial decomposition and growth of mould do not occur, the emulsion by its nature is not permanent. The dressing should be kept in an air-tight jar in a cool place.

FACTORS OF BREADMAKING¹

How frequently the hostess who does her own cooking has to apologize because her bread is too dry, too light, too coarse or perhaps is even sour. Why not know the cause and effect in regard to each factor and be sure of satisfactory results? The waste of time and material in experimenting has been saved for you by Miss Williams whose conclusions are here given.

Dough. Moderately stiff dough gives a loaf that is more rounded on top, more compact, of finer texture, whiter, dryer crumb, and richer color of crust, than does soft dough.

Liquid. Water gives a whiter bread, of finer texture, sweeter flavor, but less elasticity and greater tendency to dry out than does any other liquid. Milk makes a somewhat more elastic loaf with a deeper colored crust. Potato water hastens the time of rising, makes an especially spongy loaf, and markedly increases the keeping qualities.

Kind and amount of yeast. The use of compressed yeast allows the wheat grain to retain its sweet nutty flavor. Potato liquid yeast gives the most elastic bread with the best keeping qualities. Starters made from the dough or sponge are very likely to produce sour bread, and for that reason are not to be recommended.

Good compressed yeast can be used to as high an amount as 4 cakes to the loaf without tasting. The bread, however, becomes somewhat tasteless, lacking the delicate flavor of the wheat grain. For this reason the use of a large amount of yeast is more satisfactory in rolls where flavoring materials, such as butter and sugar, are added. The loaf is much more likely to rise high and burst open during baking, but the texture is made finer by increase of yeast. When a good quality of yeast is used an increase up to 2 cakes of compressed yeast to the loaf could be recommended for shortening time and producing better bread.

Rising. Repeated risings, even without kneading, give increase in fineness of texture, whiteness of crumb, and silkiness. Each time the dough is light it may be cut back, thus allowing the gas to escape. If bread must stand for some length of time before baking, and there is danger of souring, cutting back will enable the dough to stand an even longer time than usual without deterioration of flavor.

The cause of much coarseness in bread is overlightness, and this may easily be remedied by putting the bread into the oven sooner. The degree of lightness in the second rising determines the fineness of texture. This fineness is not lessened by overlightness in the first

¹ For further details see "Results of a Study of the Factors of Breadmaking," by Anna W. Williams. JOURNAL OF HOME ECONOMICS, 1914, February, pp. 21-28.

rising, and the bread is more elastic and silky for having reached its maximum expansion once during the process.

Kneading. Improvement in texture due to kneading after the dough has become smooth and satiny is not in proportion to the increase in labor. There is, undoubtedly, a marked difference in texture due to manner of kneading. The most effective stroke is long, firm and even, covering all portions of the dough alike, and yet quick so that the dough may be kept constantly in motion.

Loaves, which are lightly molded, without kneading, are superior in all points except in fineness and evenness of texture.

Temperature. Overheating of the dough gives a loaf of small volume, coarse texture, dark crumb, and dull, unattractive crust. Chilling the dough tends to lessen its volume and to produce compactness, coarseness, and toughness of crumb. The later in the process the chilling occurs the less influence it has upon the bread. There is very little difference in the short process bread raised at the temperatures of 26° and 40°C. (about 79° and 104°F.). Such difference is not enough to justify the additional length of time demanded by the lower temperature.

Baking. Too high a temperature for the first fifteen minutes produces a hard, tough crust, and loss of brightness, while a tender, crisp, bright colored crust, and a loaf of fine texture, tenderness and silkiness are obtained by putting a loaf doubled in bulk into a moderate oven (180°C., or 356°F.) for the first ten minutes, at the end of which the bread is crusted over and beginning to brown in patches; for the next fifteen minutes gradually increasing the temperature to 235°C., or 455°F. when the rich brown color of the crust is obtained; and then finishing the baking in a moderately hot oven, so that the crust does not darken any further. In such an oven forty-five minutes is sufficient for the single loaf.

Keeping. Stickiness or sliminess in the center of the loaf is due to a bacillus which is usually found in the flour. Thorough baking does not kill the organism, although it does somewhat retard its growth. The remedy lies first in the removal of the source of the organism. This can be done only by discarding the flour and sunning, airing, and scouring all bins, boards, and utensils for days, after which a fresh supply of flour may be obtained. The organism may be prevented from developing in the bread by keeping the loaf in a dry and especially in a cool place. In a sample made from badly infected flour the bacillus failed to develop in the ice box. Bread made with buttermilk as the liquid also fails to develop ropiness.

THE BEST METHOD FOR MAKING COFFEE¹

A series of experiments were recently carried out by Wilcox and Aborn² to determine the best method for making coffee. Seven tablespoonfuls of coffee were used with six cups of water which was regarded as the usual household allowance. The infusions were prepared by four different methods, as follows: boiling, in which medium ground coffee was placed in cold water, heated to the boiling point and then boiled for five minutes, after which the grounds were settled by the addition of a little cold water and the infusion poured off; steeping, in which the grounds were settled and the infusion poured off as soon as the boiling point was reached; percolation, in which the finely ground coffee was used and the directions furnished by the manufacturers of the percolators followed; and filtration, in which the required amount of actively boiling water was poured once through the pulverized coffee contained in a fine muslin bag.

These experiments showed that the strength of the infusion depends upon the fineness to which the coffee is ground rather than upon the time of cooking. It is essential to grind the coffee just before using, as ground coffee loses its flavor very rapidly on standing, even when kept in tin cans and for as short a time as four days. This would seem to demonstrate the advantage of the method adopted by some housekeepers of buying unground coffee and grinding the required amount each morning.

A long period of cooking extracts a greater proportion of the tannin, which imparts a bitter taste to the infusion, than of the aromatic substances which produce the flavor and aroma. Thus, in percolation where the water is forced up and flows down through the coffee several times and is in contact with the coffee for a long period, more tannin is extracted; and the water which is considerably below the boiling point when it reaches the coffee does not extract so large a proportion of the flavor-giving ingredients. On the other hand, in the method of filtration, which is recommended as best bringing out the distinctive qualities of different coffees and producing the most agreeable flavors in the infusions, actively boiling water and pulverized coffee are used. The water is then at the most efficient temperature for extracting the aromatic bodies and the coffee is in the most efficient state for the extraction of these flavor-giving qualities.

¹ See also page 466.

² *Pure Products*, 9, 1913, no. 12, pp. 611-615; *Tea and Coffee Trade Jour.*, 25, 1913, no. 6, pp. 568-574.

Accurate measurement of coffee, water, and time of cooking were found to be necessary for the production of an infusion of high quality and uniformity.

Clearing the coffee by straining is recommended rather than by the addition of an egg, as the former method introduces no foreign substances into the infusion.

From these experiments the following recipe has been prepared which will enable the housekeeper to make a clear coffee of pleasing color, taste, aroma, and flavor, with utensils found in any kitchen. This is essentially the method used in preparing the so-called "drip coffee."

On a piece of fine muslin securely fastened over the top of an ordinary coffee pot or pitcher, place seven tablespoonfuls of finely ground or pulverized coffee. Pour through this, just once, a small portion at a time, six cups of actively boiling water. The muslin should be rinsed out and kept in cold water (which must be changed every day) until used again. The cloth will then keep sweet much better than if allowed to dry. The actively boiling water and finely ground coffee are absolutely necessary.

HEATING TESTS OF HARD AND SOFT COAL AND BRIQUETTES FOR HOUSEHOLD USE

As a part of the fuel briquetting investigations carried out by the United States Bureau of Mines and reported by C. L. Wright, fifty-eight tests were made with a sectional boiler and were run for about eight hours at a steam pressure of 2 to 3 pounds—conditions comparable to those of the average house heating boilers.

The results of these tests show that in such a boiler the heating value of the different fuels depends upon the number of heat units which they contain; that the harder coals, those which contain the higher percentages of fixed carbon, are more efficient and give less trouble from smoke but under some conditions where the difference in price of hard, or anthracite coal, and soft, or bituminous coal, is very great, the use of the latter for house heating purposes is more economical than the former. For example, in a given locality where hard coal costs \$8 per ton and soft coal \$4 per ton, according to the results of these experiments it would cost 52 cents to convert a given weight of water into steam using hard coal as a fuel and only about 24 cents if soft coal were used. It must be remembered, however, that soft coal is much dirtier to handle, gives off much more soot and smoke, and the fire requires more attention than is the case with hard coal.

Briquettes are made by mixing coal dust with a pitch binder and subjecting the mass to great pressure. It is then cut into pieces of the shape of a brick and pierced with holes to allow the passage of air through it.

Although briquettes are much more common in Europe, their use in this country is gradually increasing each year. In many parts of the country where good hard or soft coals are very expensive there are large supplies of low grade coals which could be briquetted successfully and a much cheaper fuel produced for household heating.

A comparison of large and small briquettes showed the former to be more efficient than the latter. The briquettes kindled readily from a wood fire and burned well, but there was considerable difficulty in obtaining a complete combustion, which reduced the average efficiency.

By use of proper methods and less volatile binders than those now in common use, cheaper fuels, such as finely broken coal which is apt to be wasted at the mine and low grade coals, like lignite, both of which are not suitable for general use as fuel may be utilized by briquetting. The advantages possessed by properly prepared briquettes over these low grade fuels are principally as follows: A more thorough combustion is obtained without the formation of clinkers; the fuel does not cake and cut off the draft of the fire; there is less soot and smoke produced; the fuel has a higher heating value; and less care is required in running the fire.

THE INFLUENCE OF GLUCOSE ON THE COOKING TEMPERATURES OF CANDY SYRUPS¹

AMY DANIELS

There are two ways of determining when candy syrups are sufficiently cooked, first the method used by most amateurs which consists in testing the consistency of a boiling syrup by dropping a small amount of it into cold water; second the more exact method employed by professional candy makers which consists in determining the boiling temperature of syrups of different consistencies. For example, the housekeeper cooks candy syrups to the soft or hard ball stage, the crack, hard crack or caramel stage. These she is able to determine fairly accurately by the means described. The professional candy maker who must produce candies of uniform quality must have a more

¹ See also page 457.

accurate method, therefore he uses the thermometer in order to determine just when the various stages are reached.

When sucrose (cane sugar) is the principal sugar used in the candy mixture the following temperatures are given by syrups of different consistencies:

Soft Ball.....	113° C. ²	Hard Crack.....	145° C.
Hard Ball.....	122° C.	Barley.....	149° C.
Crack.....	132° C.	Caramel.....	154° C.

But when a considerable amount of glucose is used in the candy these consistencies are reached at lower temperatures. For example, when two parts of cane sugar are used to one part of glucose the typical consistencies are reached at the following temperatures:

Soft Ball.....	112° C.	Hard Crack.....	135° C.
Hard Ball.....	118° C.	Barley.....	141° C.
Crack.....	125° C.	Caramel.....	144-150° C.

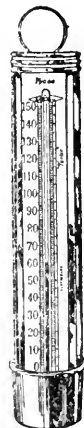
When equal quantities of glucose and cane sugar are used the syrups register as follows:

Soft Ball.....	111° C.	Hard Crack.....	125° C.
Hard Ball.....	116° C.	Barley.....	138° C.
Crack.....	122° C.	Caramel.....	142° C.

When glucose alone is used the typical consistencies are reached at even lower temperatures:

Soft Ball.....	110° C.	Hard Crack.....	122° C.
Hard Ball.....	114° C.	Barley.....	128° C.
Crack.....	120° C.	Caramel.....	133° C.

The amateur candy maker who wishes to perfect her products will find that more uniform results will be obtained if she follows the example of the professional worker and uses a thermometer in order to determine when candy syrups are sufficiently cooked. A glass stemmed thermometer registering as high as 200° centigrade can be purchased through any druggist for about \$1.25. In using these, care should be taken that the bulb is completely submerged in the boiling liquid, otherwise the mercury will register too low; but



Courtesy of
Eimer and
Amend

² Some cookery books give cooking temperatures for candies according to the Fahrenheit scale. To change the above to Fahrenheit multiply by $\frac{9}{5}$ and add 32.

this bulb should at no time rest on the bottom of the kettle, for there the temperature will be higher than that of the boiling liquid. Candy thermometers which are so constructed that the registering stem is encased in a copper frame are on the market, but these are much more expensive and no more satisfactory.

A thermometer which sells at \$2.50 is shown in the accompanying cut on page 483.

STREAKINESS OF CHOCOLATE ON CANDIES¹

"When covering chocolate is poured into a bright tin mould, allowed to cool and then taken out, the surface of the chocolate which has cooled out of contact with air is bright and glossy. If chocolate of the same temperature is used for covering pieces of glacé fruits or any substance used as a center, and cooled in contact with the atmosphere, the surface is sometimes streaky and mottled. What causes this streakiness? (I am quite aware of the fact that the temperature of the covering chocolate is important and that if used too warm it will streak and be dull.)"

Covering chocolate appears to be essentially ground cocoa bean mixed with sugar. The cocoa-fat in one sample examined was 36 per cent. On heating, the cocoa butter melts and the insoluble substances are suspended.

Experiments show that if kept at a temperature much higher than the melting point of cocoa butter (30° to 34°C.) the suspended matter tends to separate unequally. This is seen well if microscopic slides are prepared with the well-mixed melted material.

Some chocolate covering was melted in watch glasses and kept at temperatures from 80° to 130°C. for some time without stirring, and then allowed to cool. The higher the temperature the worse the surface became and streaks of lighter material were observed separating from the brown cocoa particles. The rusty or streaky appearance on chocolates appears therefore to be caused by unequal distribution of the brown cocoa particles and the colorless cocoa starch in the fatty medium. So long as the covering chocolate remains liquid or soft, the particles tend to aggregate, and so unequal coloring is produced. If the fat is too liquid there is time for it to fall away slightly from the surface and leave it roughened with the powdered cocoa. This obviously will not happen when the surface of the choco-

¹ From *The Epicure*, 21, 1914, no. 248, p. 124.

late cools quickly in contact with a metallic surface (metals being relatively good conductors of heat), and especially if the metallic surface be smooth.

THE USE OF GELATINES¹

It is well known to the cook that commercial brands of gelatine differ in their gelatinizing power; how widely they differ will be seen by the following table which resulted from a student's study of the subject after carefully calculating the cost of the amount of each brand required to make a pint of clear, firm jelly.

Comparison of costs of different brands

MATERIAL	AMOUNT OF GELATINE USED	COST OF GELATINE
	<i>tablespoonfuls</i>	<i>cents</i>
Brand A.....	1 $\frac{1}{8}$	2.5
Brand B.....	3 $\frac{1}{4}$	2.0
Brand C.....	2 $\frac{1}{8}$	7.5
Brand D.....	1	3.0
Brand E.....	2 $\frac{1}{2}$	3.3

To the above cost per pint must be added from 3 $\frac{1}{2}$ to 4 $\frac{1}{2}$ cents for sugar and flavoring used. The total cost for a pint of jelly made by using various preparations containing sugar and flavoring is about 10 cents.

In making jelly from gelatine it was found that the addition of very acid fruit juice tends to lessen the gelatinizing process.

The effect of boiling on gelatinization was found to be negligible unless continued for more than fifteen minutes. Boiling for thirty minutes produced a less firm jelly and for forty-five minutes, a decidedly soft jelly. Adding boiling water to the gelatine after soaking in cold water does not always dissolve every particle of it but boiling for a few minutes will thoroughly dissolve the gelatine and produce a clear jelly.

Although gelatine is a nitrogenous substance it does not equal some other proteins in value, nor does it take their place in building or repairing the tissues of the body and therefore should not be depended upon as a substitute for such proteins.

¹ Compiled from *Gelatine as Food*, a thesis by Ruth Klein. Senior Normal Work, 1913, School of Household Science and Arts, Pratt Institute.

TWO EXTREMES IN NUTRITION

Two studies recently made by European scientists¹ illustrate the wide range in nutritive conditions to which the human being can adapt himself.

In one case an Eskimo on the Island of Disco in Western Greenland consumed in one day 1804 grams (nearly four pounds) of boiled meat corresponding to 85 grams of nitrogen and 218 grams of fat. This is said to be far below the record figure among these people who eat very large meals at irregular and somewhat infrequent intervals. Nutritive disorders are rare among them and their physical endurance and resistance to cold is very high. The utilization of the above meal was found to be very satisfactory.

The other study was of a man in Copenhagen "who was able to maintain himself in excellent nutritive equilibrium and muscular efficiency through long periods of months, not merely days, on a diet essentially composed of potatoes and margarin." Four pounds of potatoes were eaten daily, yielding 3.62 grams of digestible nitrogen which with the margarin amounted to 3900 calories. When hard work had to be performed this man ate 8 pounds of potatoes with liberal additions of fat so that the entire energy content was brought up to 5000 calories with 10 grams of digestible nitrogen. "No dilatation of the stomach resulted from these monster meals."

Such curiosities of the literature of nutrition simply show the great adaptability of the human organism which has enabled man to live in every region of the earth. This subject is still further illustrated by Dr. Meltzer's interesting paper.² It is needless to say that neither the maximum nor the minimum of any nutritive element is desirable. The normal individual lives in the safe medium.

¹ A Study of the Diet and Metabolism of Eskimos. A. and M. Krough, Copenhagen, Bianco Luno, 1913.

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² The Factor of Safety in the Human Body. S. J. Meltzer, *Jour. Amer. Med. Assn.*, 48, 1907, no. 8, pp. 655-664; and *Jour. Amer. Med. Assn.*, 25, 1907, no. 639, pp. 481-498.

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BOOKS AND LITERATURE

Any book or periodical mentioned in this department may be obtained through the JOURNAL OF HOME ECONOMICS at the price listed.

The Care of the Child. By Nathan Oppenheim. New York: The Macmillan Company, pp. 308. \$1.25. By mail of the Journal, \$1.32.

This book gives simple and straightforward directions for the care of the child. The aim is to impress the mother with her responsibility in the physical development of her child. "The cry, 'Give us labor,' is right," he says, "for no one can live without work and enough work. But let us beware lest we look far off for this opportunity to expend our energy and develop our character, while we are unmindful of the opportunities which lie immediately before us—'Give us labor' is a good enough cry, but 'Let us do better the labor that is within our hands,' is a better."

Following this introduction are chapters on the various phases of the physical development of the child, one chapter on the education of the child, and a chapter on the relation of parents to children. In all these chapters the subject is treated in such a way as to give the unthinking woman a realization of the importance of her work, and at the same time to give much useful information to the mother seeking it. This information is not given in the dogmatic way so often employed in such books, but the reasons are given in a simple and interesting manner.

This is a book which can be recommended to the young mother on account of the simple, straightforward treatment of the subject, and the breadth of interest it gives to the discussions. Since this edition was published in 1910 some of the latest theories along the different lines are not incorporated. Especially is this noticeable in the chapter on feeding. On page 86 there is an evident misprint in the statement, "An alkaline milk will change blue litmus paper red." Since the whole subject of infant feeding is so important and there have been so many recent advances along this line, it is hoped that at least this portion of the book will be revised and brought up to date.

The Development of the Child. By Nathan Oppenheim. New York: The Macmillan Company, 1913, pp. 296. \$1.25. By mail of the Journal, \$1.35.

This is a companion book to the above. It takes up the discussion of the mental development of the child. Starting out with a biological discussion of the comparative development of the child, and a discussion of the comparative importance of heredity and environment, the author follows these by a discussion of the different factors of importance in the child's environment and the effect they have upon the mental, moral and social development of the child. The whole book tends to emphasize the importance of training and the right of every child not only to the best physical care but also to the development of his better self which can come only through the different social agencies, the school, the church, institutional life, society at large, and, most important of all, the home.

The real point of the whole book might be considered the discussion of the right of every child to a normal home life, and the value of such life in the training and development of the child.

The last chapter discusses the responsibilities of women as mothers and makes a plea for their training for this important duty. It contains an interesting comparison of the education planned to decorate a woman, with that planned to fit her for the profession which the majority of women pursue.

The Human Body and its Enemies. By Carl Hartman and Lewis Bibb, M.D. Yonkers-on-Hudson, N. Y.: World Book Company, pp. 350. \$0.65. By mail of the Journal, \$0.75.

First Book of Health. By Carl Hartman and Lewis Bibb, M.D. Yonkers-on-Hudson, N. Y.: World Book Company. \$0.35. By mail of the Journal, \$0.40.

"The Human Body and its Enemies" is a book treating of physiology, hygiene and sanitation for "pupils in the lower grades." It is written by a professor of zoölogy and a physician in Texas, and contains many local references; yet most of what is said would apply anywhere, particularly in rural sections. It is an interesting and for the most part successful attempt to popularize a great body of applied science. It is ambitious in scope; it treats, among many other things, of the structure of cereal grains, and of home-made ice boxes; of diphtheria carriers, and of the tsetse fly; of peristalsis, and of sanitary milk production; of the manufacture of vaccines and antitoxins, and of the formation of the retinal image; of meningitis and pellegra, of soap leaves, and adjustable school seats; of the cuts of beef, and of the reactions of a frog without a cerebellum; of the causes of swell-heads in canned vegetables, and of the structure of uriniferous tubules. All this constitutes rather a large contract for the dispensing of information, yet the book seems for the most part accurate and up-to-date in its statements, particularly so when dealing with the subject matter of bacteriology, microbiology, and personal hygiene. Treatment of physiological material is not always quite so fortunate in this respect, and there are a few unhappy misstatements, from the twentieth century point of view; for example, the time-honored but now antiquated explanations for the necessity of ventilation, the description of methods said to result in sufficient humidity of indoor air, the incomplete tabulation of the various digestive enzymes and their action. But the great value of the book, as the present writer sees it, is in its illuminating and exceedingly practical and concrete treatment of the many and various subjects presented. Many apparently involved details are so clearly explained and shown to be so exceedingly important in their bearing upon everyday conduct, that it would seem the book cannot fail to do much good. Moreover, the glittering generality so commonly found in books on hygiene has been replaced very largely by precise scientific data, actual statistics, and practical formulae; for example, under disinfectants, we have, besides the usual material (value of sunlight, soap and water, boiling temperature, etc.), also a table showing how long it takes given strengths of solutions of boric acid, carbolic acid, and corrosive sublimate, to destroy pus germs, typhoid bacilli, and anthrax spores; also explicit directions for the permanganate-and-formaldehyde method of disinfecting a room.

The illustrations are numerous and original; many of them are excellent, both from the scientific and from the practical teaching point of view; a few seem some-

what superfluous. The domestic science teacher will perhaps wonder why the milk bottles in the open refrigerator shown, could not have been placed on the bottom shelf!

In the opinion of the reviewer, who has had a considerable teaching experience in public schools, the book might be used as a supplementary text or reader in the upper grammar grades, although pedagogically the arrangement of subject matter is unfortunate in some respects, as all the physiology is placed in the latter half of the book; for example, it is a little difficult to explain intestinal infections if pupils have no clear idea as to what and where the intestines may be. A further objection not difficult to foresee is, that much of the subject matter would be unfamiliar to teachers, for not even among high school teachers of physiology can we assume a knowledge of bacteriology. However, let us hope that this is an objection which will in time be removed, and that the thorough training in microbiology required of domestic science teachers will open the way toward more general requirements for other science teachers.

"The First Book of Health" contains some of the same subject matter in still simpler form, for younger children—those perhaps of the fourth grammar grade.

Training the Girl. By William A. McKeever. New York: The Macmillan Company, 1914, pp. 432. \$1.50. By mail of the Journal, \$1.62.

This is a companion volume to the recently published *Training the Boy* by the same author. It is equally readable and suggestive. Clothes for the girl, When is a girl ready to marry, Marks of a worthy young man, Motherhood, The attainment of peace and poise, are topics whose discussion may easily drop from the good to the "goody-good." But the author has kept his discussion on a plane of common-sense, and his remarks and conclusions are wholesome and stimulating.

The book is divided into four parts: Industrial Training; Social Training, Vocational Training, and Service Training. As stated in the preface, the author attempts to offer a plan for "whole life" girl training.

Industrial Training, as treated, gives to the term "industrial" a meaning quite different from that which has come to be attached to the word as used in recent discussions of industrial education. It covers the home opportunities and duties for educative work, and the school training from kindergarten to college. A very helpful chapter is devoted to "Home and school coöperations." Throughout this part of the book, emphasis is laid upon the forms of participation, in which the girl may engage at various stages of her development, which tend to make her efficient as a member of society and as a home maker. It is worth while to have it repeated again and again in some form that character is a product of one's own efforts and that it can be developed in neither girls nor boys without a reasonable amount of real work.

Social Training includes chapters on Play, The psychology of the girl's clothes, Vacations, the Camp Fire girls, Social activities, and The girl and the sex problem. Parties, going with the boys, teaching the girl about herself, and other equally troublesome problems to many parents are discussed with a conservative liberality which will help many and offend none.

Vocational Training contains six chapters in which are discussed the double vocational problem for many women—that of home making considered as fundamental for all, and that of independent, self-support confronting so many and a contingency which circumstances may enforce upon any.

In the final part of the book under Service Training, six chapters treat of the girl's education and training in serving others—in the home, through opportunities of religious organizations, through participation in other organizations for civic and social betterment, and through the everyday activities of the common life.

Throughout the book there breathes the spirit of democracy. Secret societies in the high school are condemned as endangering the girl's attitude through a period when the cultivation of sympathies and ideals should be broad and inclusive. The dangers of narrowness and snobbishness in college sororities lead the author to advise against them also.

Thirty-seven well chosen illustrations add to the attractiveness of the book, and a well organized table of contents and an index make possible quick and accurate reference to any topic discussed.

The book is suggestive and wholesome. It should be helpful to parents and teachers or any others engaged in the direction and leadership of girls and young women.

Vocations for Girls. By E. W. Weaver. New York: A. S. Barnes Company, 1913, pp. 200. \$0.75. By mail of the Journal, \$0.80.

The first chapter of this book contains an exhaustive list of vocations open to the girl with limited education, covering commercial, industrial, artistic and professional fields. Accompanying the list is the wholesome advice that the girl who reads should consider first of all those occupations open to her in her own town.

The book is simply written, rather in the form of a textbook, each chapter being followed by practical exercises, questions for debate, topics for study and research, and an index of vocational literature. At the end is given, alphabetically, a list of possible occupations, and a cross reference list of schools in New York offering special training for women. While the book as a whole advances no essentially new ideas, it deals with an interesting subject in a very logical and readable way.

Vocations for Girls. By Mary A. Laselle and Katherine E. Wiley. Boston: Houghton, Mifflin Company, 1913, pp. 139. \$0.85. By mail of the Journal, \$0.92.

This book, written by two teachers in a large high school, contains much advisory material both for the girl choosing a vocation and for those concerned in helping her to make the choice.

Many possibilities, from domestic service and factory work to teaching and the library, are discussed, the advantages and disadvantages of each being impartially reviewed.

Although the book is primarily written for the girl who cannot afford a long and expensive education, the importance of a sound educational basis for any vocation is emphasized. A plea is made that the school curriculum should provide a truer adjustment to contemporary life, should offer to each individual girl opportunity to develop her natural bent.

Young Working Girls. By Robert A. Woods and Albert I. Kennedy. Boston: Houghton, Mifflin Company, 1913, pp. 185. \$1.00. By mail of the Journal, \$1.08.

This most interesting little book deals with the many sided problem of the adolescent girl of the tenement house, factory and department store.

It is a composite statement of facts gleaned by two thousand social workers in twenty different cities, and represents the first coöperative work of the National Federation of Settlements, formed in 1911.

The first five chapters deal with the girl as she is, handicapped by her environment and her inadequate home life, lacking in ideals, constantly drawn by her natural love of pleasure and display into paths of temptation and moral danger.

The remaining nine chapters, while they do not attempt an actual solution of the problem presented, lay down principles for a possible course of procedure and point to the settlement as the logical source of assistance.

The book will appeal not alone to those actively engaged in philanthropic work, but to every one whose social conscience has been awakened to a sense of responsibility.

A Model Housing Law. By Lawrence Veiller. New York: Survey Associates, 1914, pp. 343. \$2.00 postpaid.

To the worker for better social conditions in whatever field, there must come, sooner or later, the realization that he is struggling with a problem of wide ramifications and of definite relation to organic laws, and that his problem will always remain unsolved and the difficulties remain insurmountable until he has the assistance of the law and, what is more, the sympathetic interpretation of the law.

It has been said that in the United States more than half the public offices, nearly sixty per cent, in fact, are filled by lawyers or men of legal training, and that the reason Germany has better social and economic laws is because of the much smaller percentage of offices filled by men of legal training.

Laws to be effective must serve specific needs and should therefore be the work of specialists, not of the advocate, for the law is not the end but merely the means to an end.

Such a book as is presented in "A Model Housing Law" must be of inestimable value and service to those seeking for improved conditions for community living, than which there can be no more vital question. The value of this work lies not in the fact that it is perfect in all its deductions, or that it presents a ready-to-hand law that will fit every or any case, but that in concise form it gives us at once the ideas and conceptions of a trained man and an expert, and his faithful collaboration of the things worth while in existing laws. It should save many hours of study for the individual, committee or commission engaged in the work of improved housing.

Good housing for the poor can never be practically accomplished save by adequate housing laws, for, while the building of a few model houses, subsidized possibly in part, here and there throughout a community may help to make possible the wiping out of a slum, and to inspire a few with the desire for better living, yet it is the plain duty of any city or town to prevent the occupation of buildings unfit as well as to prevent the erection of those that may become unfit, and to so plan the city block as to encourage and make possible the types of houses serving best the needs of its own people.

Housing and city planning can never be disassociated, nor can either be sure of accomplishment save by intelligent laws dealing directly with the ends sought. Mr. Veiller points the way most authoritatively.

A Survey of the Woman Problem. By Rosa Mayreder. New York: George H. Doran Company, pp. 275. \$1.50. By mail of the Journal, \$1.62.

An essential for interest in further literature on this subject is well met in the new form of treatment which this book presents. Not wholly in agreement with the Woman's Movement the author regards it, nevertheless, "as one of the phenomena which honorably distinguish the present epoch from all previous periods of history; nay, more, it seems to be one of the finest manifestations of an epoch which otherwise, in its poverty of ideals, of noble feelings, and of passionate beliefs, betrays evidence of degeneration."

As the most widely diverse assertions are quoted one after the other, one is forced to accept the author's statement that "from whatever point of view we may consider the problems that relate to women we are certain to encounter something hopelessly contradictory. Nowhere else do such extreme antitheses lie so closely parallel to one another."

The treatment of the subject is far from a superficial or simple one. The vigorous style and logical reasoning as well as intimate knowledge of a large number of authorities reveals the characteristics of the German student. The nature of the arguments are from the ethical-psychological standpoint rather than the political, the economic or the social. While recognition is given the fact that the movement has become a practical one through the economic revolution, emphasis is placed upon its idealistic rather than materialistic origin and that "whatever vantage ground woman may gain through economic betterment will avail little toward her freedom unless quite other influences begin to operate in her favor." While deploing the present limitations of sex, both male and female, there is no note of pessimism in the work, but, rather, the assertion that, "If we trace the lines of the past which lead forward into the future, we find in unmistakable outlines the ideal of a humanity in which sex has a better and happier significance than it has hitherto possessed."

The nature of the best and most suggestive portions of the book may be realized from such striking sentences as the following, which, together with its admirable, if lengthy, historical survey of the subject, make a book well worth careful reading.

"We shall be able to know what women are only when we no longer dictate to them what they should be."

"The bicycle has done more for the emancipation of woman than all the strivings of the entire Woman's Movement taken together."

Practical Dietetics. By Alida Frances Pattee. Mt. Vernon, N. Y.: A. F. Pattee, 8th edition, pp. 475. \$1.50. With Handbag Diet Book, \$1.75.

This book is excellently planned for the nurse's use by one who understands the nurse's needs. It contains up-to-date theory and well tried recipes. It is not too technical for a beginner, and puts in clear words the theories necessary for the understanding of the food problem. Altogether it seems to be a very comprehensive volume but small enough for the trained nurse to slip into her bag in going to a "case." A great variety of foods are represented which are suitable for all kinds of invalid diet and the total energy value of most, if not all, have been given. This will be useful in computing the total values of food combinations and in calculating amounts of protein, fat and carbohydrate in any dietary whenever required, without the tedious mathematical process usually involved. Part III is also of interest to the trained

nurse as it gives both general and special diets used in many hospitals. Quotations from well known writers are to be found under the titles of various diseases which give the dietetic treatment. The chapter on Infant Feeding is somewhat antiquated. The book continues with the diet of young children, the diet during adolescence and old age. The state board examination questions are useful for the nurse studying for her examination.

Food as Body Fuel. By H. P. Armsby. *Pennsylvania Sta. Bul.* 126, 1913, pp. 59-68.

The animal as a prime motor, energy, transformations in the body, and the origin of animal heat, are discussed and a brief summary is given of the author's investigations and the work of others which has to do with these questions.

The results presented, he concludes, may be taken "as demonstrating that the animal heat arises exclusively from the combustions in the body, but they have a much broader significance. They show that the transformations of chemical energy into heat and work in the animal body take place according to the same general laws and with the same equivalencies as in our artificial motors and in lifeless matter generally. The great law of the conservation of energy rules in the animal mechanism, whether in man, carnivora or herbivora, just as in the engine. The body neither manufactures nor destroys energy. All that it gives out it gets from its food and all that is supplied in its food is sooner or later recovered in some form. We are fully justified, therefore, in speaking of the food as body fuel, and in our studies of its utilization we may be confident that any food energy which does not reappear in the form of heat or work has not been lost but has been stored up in the body as the chemical energy of meat, fat, etc., which may later serve to supply food energy to the human body when consumed as food by man."

Candies and Bon Bons and How to Make Them. By Marion H. Neil. Philadelphia: David McKay, 1913, pp. 287. \$1. By mail of the Journal, \$1.10.

The aim of this book as stated by the author is, "To satisfy the increasing demand for a practical book on making candy and bon bons." She follows this by the statement, "Experience has proved the reliability of all the recipes and in every case I have striven to put the matter in as plain a form as possible."

The book contains chapters on utensils for candy making; materials used; tables, weights and measures; preparation hints; and numerous recipes. Only a very small proportion of the space is devoted to any theoretical discussion. The following quotations may be taken as indicative of the character of such discussions. "Parents do their children a great injury by denying good, pure candy. The child requires a large amount of sugar, for sugar assists in the processes of growth as no other food element can possibly do. Children of an older growth, too, require a proper amount of good, pure sugar candy. For these white crystals feed the ever burning flame of the body supplying animal heat which is life and arousing the nervous energies, in some cases even better than phosphates." (Page 20). "Glucose or starch sugar is made from corn starch, which is as natural a product as cane sugar. It is prepared by the action of a dilute solution upon corn starch." (Page 21).

The statement, "Cream of tartar or tartaric acid may take the place of glucose in some recipes, as they also tend to prevent granulation," on page 21 is followed by

further explanation. On page 79 we find the statement, "When the syrup first boils add the glucose or the cream of tartar; this cuts the grain, somewhat reduces the strength of the sugar, and helps to keep it creamy and soft." There seems to be no very good reason for her dogmatic statement on page 81 that glucose should be added after the sugar is dissolved.

The recipes are not very well organized. This means more elaboration of detail and repetition than would otherwise be necessary. We find the same brittle candy repeated six times under six different names. The only change being in two cases peanuts were used instead of almonds, in one case confectioner's sugar was used which is more expensive but does not give any different results from the granulated sugar, and in another case lump sugar was used which certainly would be more difficult to handle and more expensive, and is only a survival of the time when loaf sugar was less likely to be adulterated than other kinds. These recipes are: chocolate nugatine, page 71; nougat paste, page 101; caramel nougat, page 95; peanut taffy, page 160; French candy, page 180; peanut cracker, page 255. Other similar forms of repetition could be noted.

The details of the experiment are not always accurately stated. On page 71 honey alone is put in a saucepan and stirred until dissolved. On page 26 the author speaks of melting sugar in water. Cream of tartar is frequently added in pinches rather than being measured.

We would question the necessity for some of the details given in the recipes. Page 197, lemon juice and soda are dissolved in boiling water and then added. Page 198, tartaric acid is used but is not added until after the candy is done. Unless used for flavor what function does this acid perform here? In several recipes a teaspoonful of glucose is called for, in many cases being used in connection with some other kind of syrup. Page 255, sugar is called for twice. Page 143, the butter is divided into three portions and added at three different temperatures. Lump sugar is frequently called for. Is there any advantage in this?

This book is suggestive in offering different ways and combinations for making candy. The reader may judge of its value and accuracy from the above quotations.

Around-the-World Cook Book. By Mary Louise Barroll. New York: The Century Company, pp. 360. \$1.50. By mail of the Journal, \$1.62.

The housewife of today will find in this book a valuable addition to her culinary library. The casual observer is much disappointed in looking through the book to find an entire absence of illustrations so commonly used in similar publications. Its pages are replete with compilations of recipes which cover a wide range of cookery and are suggestive and stimulating. As no standard measurements are maintained throughout the work it is a more helpful guide to the experienced than to the inexperienced.

The American Cook Book. By Janet McKenzie Hill. Boston: Boston Cooking School Magazine Company, 1914, pp. 8 + 255, pls. 16. \$1. By mail of the Journal, \$1.10.

A large number of recipes are brought together for preparing meat, fish, fruits, vegetables, and other foods for the table. The author points out that in the case of recipes "it is well to note the essentials and the nonessentials that make up its

content. Nonessentials are usually added for variety in flavor or appearance, and if not agreeable may be eliminated without detriment to the dish; at the same time let no one forget that flavor in food is a prime requisite and it must be brought out or retained in the viand as the case may demand."

Cooking Notes for Voluntary Aid Cooks. By Miss B. H. Davy. Exeter: M. A. Rudd and Son, 1913, pp. 90. 1 shilling. Reviewed in *Brit. Med. Journ.*, 1913, no. 2739, pp. 1372-1373.

Cooking for large numbers with limited equipment, British Army requirements for training of cooks, cooking problems, and related questions are discussed and recipes are given. The reviewer states that the book is useful for yachtsmen, campers, etc., as well as for the special purpose for which it is designed.

Simple Garments for Children (from 4 to 14). By M. B. Lynge. London and New York: Longmans, Green and Company, 1913, pp. xvi + 47, patterns 10, pls. 6. \$1.25. By mail of the *Journal*, \$1.30.

This is a book written with the purpose of teaching methods of making hygienic clothing for children. Its plea is against the number of weighty garments worn by children. The book is not intended for the use of beginners, but rather for those who have a knowledge of sewing. It contains a set of patterns for use in cutting the garments suggested in its pages, and also directions for knitting undergarments, jerseys, stockings, etc.

As a practical guide to workers in this country, the book has little value. Machine-made, knitted underwear, inexpensive, of good shape, and bearing the Consumers' League label would be urged upon the busy mothers rather than additional hours of labor spent in knitting.

The making of other garments has its strong appeal, but the patterns furnished are not fully explained, and the methods of making are incomplete.

A Study of the Foot and Foot Wear. By F. W. Weed. *Military Surg.*, 30, 1912, No. 2, pp. 170-211, figs. 23.

Though written with special reference to military requirements, this article presents a large amount of information of general interest with reference to the structure of the foot, determining the requirements for foot wear, and similar topics.

According to the author's deductions and conclusions, the strength of a foot varies in proportion to the potentiality of the supinator group of muscles. Weakness in a foot may be prevented by proper exercises and foot wear, while incipient foot weakness may be accurately determined by means of proper apparatus such as is described in the article. A poorly fitting stocking, that is, one which is too tight, is almost as productive of bad effects as is a small shoe. "The most common direct results are ingrown nail and hallux valgus, though crumpled toes may be due in large part to too short a stocking and it may contribute to the more serious effects of a narrow shoe. . . .

"A foot measuring $10\frac{3}{4}$ inches in length and $3\frac{3}{4}$ inches in width can not wear a stocking under size 11 without there being a constant tendency to the production of ingrown nail, hallux valgus, crumpled toes, etc. . . . The thicker the stocking, the greater the degree of compression on the foot, naturally, so this remark applies particularly to the thicker stockings used in marching."

DEPARTMENT

CF

HOUSEHOLD SCIENCE

"The style or contour of a shoe should be so designed that its effects on the foot for which it is intended will be least harmful. The contour of a shoe which is recommended for army wear should conform to basic principles, summed up as follows:

"The inside line of the forward part of the shoe should form a straight line, or one approximately so. The inward twist at the shank should not be too great, however, else corns are apt to develop on the smaller toes. There should be an abundance of room across the ball of the foot.

"The sole should be flat across, to preserve a secure foundation for the foot, but may have a slight upward curve at its forward end to prevent the toe catching in unevenly raised places on the walking surface.

"The heel, when it is indispensable, as in the military service, should be low, broad, long and flat.

"The fit of a shoe is correlative to its contour. Pressure on the forefoot results in a pathological weakening of the mechanism, varying in proportion to intermittency and amount, more especially when there are other contributing influences. The best efforts of a foot can not be put forth when its intrinsic muscles are inactive from pressure atrophy. At the same time, a shoe to be of any service or comfort, must be so fitted, that when in motion, there will be a minimum of friction between the foot and shoe.

"Stability may be attained by a close fit back of the mid-tarsus, where lateral pressure at the heel, and from the heel, forward and upward to the front of the ankle joint, and around the ankle, will have no undue influence on the integrity of the foot."

A bibliography is appended to the article.

BOOKS RECEIVED

Household Physics. By Alfred M. Butler. Boston: Whitcomb & Barrows. 1914. Pp. 382. \$1.30. By mail of the Journal, \$1.42.

Physics of the Household. By Carlton Lynde. New York: The Macmillan Company. 1914. Pp. 313. \$1.25. By mail of the Journal, \$1.40.

Elementary Household Chemistry. By J. F. Snell. New York: The Macmillan Company. 1914. Pp. 307. \$1.25. By mail of the Journal, \$1.40.

General Chemistry. By Lyman C. Newell. New York: D. C. Heath & Company. 1914. Pp. 584. \$1.20. By mail of the Journal, \$1.30.

Source Chemistry and Use of Food Products. By E. H. Bailey. Philadelphia: P. Blakiston's Sons and Company. 1914. Pp. 517. \$1.60. By mail of the Journal, \$1.80.

Experimental Domestic Science. By R. H. Jones. Philadelphia: J. P. Lippincott Company. Pp. 235. \$0.80. By mail of the Journal, \$0.88.

Domestic Science Principles and Application. By Pearl Bailey. St. Paul: Webb Publishing Company. 1914. Pp. 343. \$1. By mail of the Journal, \$1.12.

Principles of Cooking. By Emma Conley. New York: American Book Company. 1914. Pp. 206. \$0.52. By mail of the Journal \$0.60.

The Work-a-day Girl. By Clara E. Laughlin. New York: Fleming H. Revell Company. 1913. Pp. 320. \$1.50. By mail of the Journal, \$1.65.

NEWS FROM THE FIELD

The Michigan Home Economics Association. The Association met Friday, October 30, in Kalamazoo, Michigan.

Miss Blackman, of the State Normal College, Ypsilanti, spoke on "Practical Household Management in the Elementary and High Schools."

Dean Georgia L. White of Michigan Agricultural College spoke on "The Modern Home."

Miss Martha Van Rensselaer, President of the National Home Economics Association, gave the address of the afternoon.

After this program the annual business meeting was held.

Washington, D.C., Home Economics Association. The regular meeting of the Association was held on Tuesday, October 6, at the Public Library. Miss Julia Lathrop was scheduled to speak at the meeting, but was unable to do so.

The meeting opened with the reading of the minutes, and the reports. Following this was a discussion regarding the work to be undertaken during the year, and the subjects which would be of most general interest. The opinions of the individual members are to be ascertained before definite plans are made.

Miss Emma S. Jacobs was appointed chairman of a committee, whose duty is to assist, in such ways as may be desired, one of the district nurses in the city.

The Home Economics Association of Greater New York. In response to a request from Mr. Routzhan, who represents the Russell Sage Foundation, an effort is being made to assemble illustrative material for teaching household arts subjects, this to be available as a permanent exhibit. It is Mr. Routzhan's purpose that this material be so arranged that it could be easily sent from place to place for the use of schools, colleges, and other institutions. The President appointed the following committees representing the various phases of household arts work: Miss Anna Barrows, Chairman; Miss Helen L. Johnson and Miss Emma Gunther, Administration; Miss Margaret McGowin and Miss Laura I. Baldt, Domestic Art; Miss Elizabeth Condit and Miss Fannie Perkins, Domestic Science.

Mr. John Purroy Mitchel, Mayor of New York, has appointed a committee now known as the "Mayor's Food Committee." The members of this group have been very active in their efforts to lower the cost of living, first, by establishing several municipal markets; second, by educating the public through printed leaflets; third, by securing the cooperation of the schools.

The Home Economics Association of Greater New York asked the Mayor for a speaker for October 29 in order that the teachers may cooperate most wisely in this work.

The Home Economics Association of Philadelphia. The first meeting in the fall was held at the William Penn High School, and took the form of a social meeting. Mr. Frazee, the superintendent of vocational education in the Philadelphia public schools, gave the address.

The executive committee laid before the society the plans for the study classes for the winter. Miss Winslow, of Columbia University, will lead these classes, one on the Budget, the other on Nutrition. They will meet every other week for a course of ten lectures and discussions. A class in dietetics with laboratory work will be formed, if there is sufficient call for it. It will be taught by Miss Hannah Hill, instructor at Drexel Institute.

An effort is being made to extend the work and sphere of influence of the association, that all who are interested in the development of the home and the city may share in this unequalled opportunity which the association has opened for us by its winter plans.

South Carolina Home Economics Association. This association which was organized last March has outlined for its first year's work the planning of Home Economics courses for the schools of the state, and then trying to get the state board of education to accept these courses. It is hoped in this way to unify the work.

The need of a state supervisor in Home Economics is felt and it is possible that one may be secured through the efforts of this association.

Miss Mary B. McGowan, the Secretary, has just been promoted to the position of Head of the Domestic Science Department of Winthrop College, Rock Hill, S. C.

Teachers College, Columbia University. Mrs. Grace Hitchings Buckner, instructor in costume design in the department of household arts, Teachers College, spent the month of June in the famous dressmaking establishment of Worth in Paris, securing special practice in design. A year or two ago Mr. Jacques Worth visited the School of Practical Arts, Teachers College, addressed the students and became interested in Mrs. Buckner's work in costume design. As a result he opened the way for Mrs. Buckner to enjoy the unique opportunity of working in the famous Paris establishment.

Extension Schools in Home Economics. Among its other interests, the Department of Home Economics at the New York State College of Agriculture has provided about thirty extension schools in Home Economics during the college year 1913-1914.

Miss Miriam Birdseye has been employed by the college to present the work in Home Economics continuously from December 1 to April 1. In addition, regular members of the staff have visited these schools when there was an unusual demand for lectures in any one week. The value of the schools is in the presentation of definite instruction for a continuous time, which is better than the occasional lecture.

Continuation Classes of Montclair, N. J. Perhaps the most striking instance of continuation classes in household arts for home women is the group of short courses instituted by the public schools of Montclair, New Jersey, organized in 1913-1914, which were attended by upwards of 200 women. They were held in the public school laboratories and were taught by the regular teachers of household arts who received extra compensation for this service (one-half of which under the provisions of the New Jersey Industrial Education Law was returned to the community by a state grant). The courses were given at 3.30 or 4.15 o'clock in the afternoon and one evening course was arranged at 7.30. The members of the classes limited to 20 except in one lecture course, paid fees covering only the cost of materials used. Ten lessons were given in each of the following: Marketing, with work in cooking;

chemistry of food with practical menus; salads and desserts; theory of marketing and fireless cooking; bread and rolls; and household routine. The classes are to be continued this year and, on the request of the local Housewives League, a class for domestic help is to be started, the employers arranging to give their employees free time off to attend the class. In describing this successful series of courses one will note especially their practical character; their organization in "short units," each relating to a limited subject; the variety offered to meet various needs; the afternoon hour at which they were given as especially favorable for housewives.

School Credit for Home Work.¹ Oklahoma City has recently been added to the many cities and towns whose schools give credit for home work. The credits under their plan are as follows: Cultural and social credits include reading magazines, books, etc., practicing on the piano or organ, glee club work, girls' club work, and Boy Scouts' work. A girl may earn forty credits a month for club work and a boy fifty credits as a Boy Scout.

The labor group may win ten points an hour for not more than three hours in one day. Here the boys are brought into contact with business and professional pursuits.

The credits for deportment in school run as high as 200 in a month, and are awarded by the high school faculty. The credits for deportment at home may reach 100 a month if recommended by the parents.

Under health, credits are given for sleep, amounting to not less than eight hours a day in a well-ventilated room; baths, at least two a week; care of teeth, hands, nails, face, hair and clothing.

Under this plan it is possible for a student to earn 1500 to 1800 credits a month outside the regular credits. For every 500 of these outside credits 5 per cent is added to the branch of study in which the student has the lowest grades.

Household and Social Science.² Under the name of "Home Science and Economics" a Department of King's College for Women (University of London) has for the last six years been venturing a new course in education of University standard.

From the generosity of private donors £75,000 has already been received, and £10,000 has been contributed by a City company. Financial recognition has also been given by the Treasury and the London County Council. In the Report of the Royal Commission on University Education in London the value of an educational opportunity of this kind was fully recognized, and it was recommended that as a "Department of Household and Social Science" (a somewhat happier term than Home Science and Economics) this course should have a place in the University. The Departmental Committee having incidentally approved the recommendation, the Senate has undertaken to accept the whole educational and financial responsibility for the department, so soon as a further endowment of £30,000 can be collected and the course thereby ensured financial stability.

A site on Campden Hill having been secured by the University, buildings are already in course of erection. Laboratories have been provided by Lord Anglesey, while Sir Richard Garton has given a hostel for students, which, by permission of the Queen, is to be called Queen Mary's Hostel, and which will be opened by Prin-

¹ For fuller accounts of home credits see JOURNAL OF HOME ECONOMICS, 6, 1914, no. 2, pp. 141-146.

² From the *Morning Post*, June 3, 1914.

cess Christian on the 11th inst. Class-rooms, administrative offices, a refectory, and so on, will be built directly money is found.

A course of this kind has infinite possibilities. The household is the unit on which are built up many of those problems so easily classed as social and the consideration of which is occupying all shades of reforming zeal.

The numerous problems of the day that are roughly classed as "Infant and Child Welfare" must eventually form a definite course of study for the student of "Household and Social Science."

The first consideration must be to provide an education liberal, inspiring, and practically useful, and in making the housewife to make the whole woman capable in her immediate surrounding and resourceful as a citizen.

The whole scheme has so far had to be tentative, if only for economic reasons. The sum already subscribed will seem large only to those who know little of the amounts necessary to endow teaching and erect suitable accommodation in London.

The Two-Dish League.¹ The Paris gourmets assert that the influx of Americans and English who demand five or six courses at a meal is changing the character of the restaurants that were famous for one or two special dishes. In the old days the boulevardier went to the *Café Anglais*, the *Tour d'Argent* or the *Maison Doree* for the one dish that was the speciality of each cafe. One excelled in fish, another in roast, a third in fowl.

When M. Joseph Galtier suggested in the *Temps* that an association be formed of those who would devote themselves to two dishes at a meal, the "Two-Dish League" was born.

The motto of the league is: "Two dishes, two wines, eight friends."

"The two dishes served at our dinners will be chef d'œuvre, wonders of the art of cooking known only to our country and worthy of true disciples of Lucullus and of Brillat Savarin; our two wines will be the right wines in the right place and handled in the proper manner. We hope thereby to bring about the renaissance of this great national art."

Mme. Daniel Leseur, the French writer, says if she had her way every banquet or plain dinner, official or private, would be a two-dish affair. Henri Duvernois, a well-known critic, notes two illustrious authors in support of the two-dish scheme, Montaigne and Theophile Gautier. Maurice Rostand, son of the author of "*Cyrano de Bergerac*," submits a menu of his own and would like to see the dinner extended to three dishes and a few more friends.

Windows Open by Law. Paddington, England, somewhat more than a year ago obtained the approval of the Local Government Board on the following by-law:

Except as inhereafter provided for, every lodger in a tenement house shall cause every window of every room that has been let to him and is used as a sleeping room to be opened and to be kept fully open for at least one hour in each morning and afternoon. Provided that the lodger shall not be required to cause any such window to be opened or kept open at any time when the state of the weather is such as to render it necessary that the window shall be closed, or when any bed in any such room is occupied by a sick person to whom such opening of the window would prove harmful.

The penalty of a fine is £5.

¹ From the *Baltimore Sun*, April 10, 1914.

Training Vocational Counsellors. In view of the growing interest in the vocational guidance of boys and girls in the public schools and the consequent need of competent trained advisers for this work, the Women's Educational and Industrial Union is offering this year a course for vocational counsellors. It is a full-time course covering an academic year and will be of a distinctly practical nature. Miss Florence M. Jackson, director of the Union's Appointment Bureau and vocational counsellor for Smith and Wellesley Colleges, will have general supervision of the course, and Dr. Susan M. Kingsbury professor of economics at Simmons College and director of the Department of Research at the Women's Educational and Industrial Union, will be in charge of the investigations. Candidates will be chosen according to their fitness for the work. Tuition scholarships will be awarded to a limited number for the first year, which opened October 1.

The purpose of the course is to provide a knowledge of industry, of methods of industrial investigation and use of statistics which form the proper foundation for vocational guidance; to supply other training valuable for vocational advisers; and to afford a means for the practical application of principles and methods studied.

The curriculum includes general instruction and also instruction in psychology, education, economics, statistical methods, and laws relating to child labor. A study will be made of vocational guidance methods in use in the United States and Europe, and opportunity will be afforded for observation and practice in the various commercial and charitable employment agencies in Boston, as well as in the Union's vocational bureau. This work will be supplemented by lectures and discussions upon the theories of vocational guidance. An important part of the training is the direction in industrial and social investigation and in methods of handling and interpreting data.

The course should be of particular value to teachers and social workers. The vocational activities conducted by the Union, through its department of vocational advice and placement, its normal courses in vocational training, its research library, and social work departments, give a practical background for such training. The Union occupies a foremost place among organizations engaged in vocational work for women. And this new undertaking is in line with its other endeavors to broaden their educational and industrial opportunities.

Massachusetts Federation for Rural Progress. The second annual meeting of the Massachusetts Federation for Rural Progress was held at the Massachusetts Agricultural College, Amherst, Massachusetts, September 18, 1914. Representatives from all boards of trade and other organizations interested in seeing county agents in every county of the Commonwealth had been invited to be present, aside from every organization affiliated with the Federation.

The general subject for the afternoon was "The Value of the Work of the County Agricultural Agents in Developing the Agriculture of the State." President Kenyon L. Butterfield, also President of the Federation, presided. The first to speak was Mr. Howard Gross, President of the National Soil Fertility League, Chicago, on "The Value of County Agent Work to the Agriculture of the Nation." Following him came Mr. W. A. Lloyd, Agriculturist in Charge of the North Central Section, on "The Value of County Agent Work to the North Central Section." Both these talks were practical and suggestive of the work that had been done in the sections indicated. Following came a report by Mr. J. A. Scheuerle and Mr. C. J. Grant of the work being done in Hampden County, Massachusetts. The Hampden Coun-

ty Improvement League having been organized but one year, the work is being organized as rapidly as possible. Their report showed what might be done in one year's time which was most gratifying to those specially interested in the endeavor.

President Butterfield then gave his address and outlined a rural policy in Massachusetts. He emphasized the point of getting together all the societies interested and getting a conscious aim expressed. There must certainly be in any organized movement a knowledge of conditions existing, and in the second place a program of improvement, and there must be a correlation of effort. It was recommended by the President that a special committee be appointed to study the questions which had been aroused in that afternoon's meeting and to bring back to the Federation for discussion a very full report upon these particular points. Such a committee was appointed, and after a brief report from the Secretary and Treasurer and the Commission Chairman the meeting was adjourned.

International Council of Women. The Quinquennial Council Meeting of the International Council of Women was held at Rome, Italy, May 5-14, 1914.

Growth in membership and geographical extension was indicated in the reports from Councils in nearly every country of the world.

Among the many resolutions adopted by this great body of women, some of the most significant were those urging the enactment of laws to protect deserted wives and children, and the encouragement of measures to procure for emigrants proper employment bureaus, bureaus of information and instruction, and supervision for young girls on emigrant ships.

League for the Protection of the Family. This organization formed nearly thirty years ago under the leadership of the late Rev. Samuel W. Dyke of Auburn-dale, Mass., has concerned itself largely with the divorce problem, with the development of legislation on this subject and the education of public opinion. It publishes annual reports which would be of interest to Home Economics workers especially those dealing with social and economic matters. The address of the new Corresponding Secretary is Rev. John L. Seawell, 11 Foster Street, Worcester, Mass.

Women's National Agricultural and Horticultural Association. A National association of women interested in horticulture and agriculture was formed by the expressed wish of more than a hundred persons who were present at the Horticultural Conference, May 1913.

One year later they held their annual conference at Ambler, Pa., where the pioneer and extremely practical horticultural school for women was established. There was gathered together a goodly assemblage of women who have made good in a number of lines belonging to the out-door profession. When one sees the list of over 800 women who have made good at floriculture alone, it is proof positive that in agriculture and its kindred branches there is a big field full of attractions for women who love the out-door life. The program was particularly interesting and varied, making strong appeal to all sorts and kinds of men, as well as women, as this list and partial program show:

Mrs. Francis King, Alma, Mich., President, The True Role of the Horticultural Society; Mr. David Fairchild, Bureau of Plant Industry, Washington, D. C., Foreign Food Plants; Mr. George T. Powell, President Agricultural Experts Association, Small Fruit Culture for Women; Miss Martha Van Rensselaer, Director School of Home Economics, Cornell University, Farm Housekeeping; Mr.

W. P. Hartman, Medford, Chief of the Bureau of Markets and Information, Pomona Grange of Suffolk County, New York, The Grangers' Market Bureau; Mr. Walter P. Stokes, President Garden Club of America, The Coöperation of the Women's National Agricultural and Horticultural Association, and the Garden Club of America; Prof. David F. Warner, Professor Poultry Husbandry, State College, Pennsylvania, Broilers for Profit; Miss Elsie McFate, Owner Hillside Hardy Flower Gardens, Hardy Flower Culture; Mr. Bertrand H. Farr, Iris expert, Wyomissing, Pa., Raising Rainbows.

The objects of this Association are to promote interest and success in horticulture and agriculture by the exchange of information among its members; to bring together supply and demand of produce among its labor, and to increase the knowledge and use of existing institutions.

Child Welfare Exhibition. More than a million and a half has been the attendance at ten large Child Welfare Exhibitions held in the United States during the past four years. The attendance at the large number of smaller exhibitions cannot be calculated.

These exhibitions, the first of which was held at New York three years ago last January, have aimed to show: What we are doing for the children, what we are not doing for the children, what we ought to do for the children.

The exhibitions have been very effective in arousing the public conscience, and in securing needed reforms in the way of legislation and community action. They have been equally effective in educating, not only the mothers, but fathers, and brothers, and sisters, concerning the needs of the child.

The results of legislation have been of many kinds—A new bathing beach in Chicago; an infant welfare division in the municipal board of health in the same city; a factory inspection ordinance in Kansas city; housing inspection in Louisville; better regulations concerning child labor and the work of women; improved systems of public recreation; and the establishing of courses for mothers in the public schools in various cities.

Where, as has usually been the case, the Child Welfare Exhibits have been held independently, they have aimed to cover a very wide field, including: Health, housing, schools, recreation, the working child, the dependent and delinquent child, various children's charities, law and the child, and standards of living. The Child Welfare Exhibit held at Dublin, July 15–August 31, under the Women's National Health Association of Ireland directed its attention chiefly to the questions of Child Health and Play, since the other questions above mentioned are being represented by other societies, with whose exhibits we are working in close coöperation.

The exhibit occupied thirteen rooms, forming a continuous corridor. These rooms were decorated in a uniform color scheme, and all charts and photographs were mounted on wall screens of a uniform size, a device which was at once novel and effective.

Electric Household Appliances. In connection with a study of the possibilities of electricity for household purposes, Miss Anna M. East, who is now studying at Teachers' College, Columbia University, has compiled a list of American manufacturers of electric household appliances which should prove interesting to many teachers of Home Economics.

Miss East will be glad to hear from teachers and others who have met problems in the use of electric household appliances.

Teachers of Home Economics visiting in New York City will find electrical appliances on display at the New York Edison Building, Irving Place and Fifteenth Street, and at their other display rooms. Similar exhibits are found in other cities.

National Education Association. Miss Sarah Louise Arnold, who was to preside at the Household Economics section of the National Education Association Meeting in St. Paul on July 9th, was unable to be present, and at her request, Mrs. Alice P. Norton, represented the American Home Economics Association. The meeting was opened with Miss Grace Shepherd, treasurer of the National Education Association presiding, and was later put in charge of Mrs. Norton. Mrs. Norton read a paper on the Renovation of the Home by Home Economics, and was followed by Miss Rausch of the extension department of the University of Washington; Dr. Snedden, commissioner of education for Massachusetts; and Miss Anna East, who gave an interesting account of the work in Porto Rico. A discussion followed, in which a great many took part, including representatives from California, from Kansas, and from many different sections of the country. Miss Louise McDanell, assistant professor in the University of Minnesota, acted as secretary of the meeting, and also gave an account of the courses offered at Minnesota.

The meeting was unusually well attended.

Brief Notes. The Housing of Homeless Girl Workers is being met in Chicago by the seven Eleanor Clubs, which accommodate 60 to 100 girls each. They pay \$3 to \$5 a week for board and room, are given the free use of sewing machines and pay five cents for the use of the laundry. Evening classes offer instruction in various branches, and recreation is amply provided. The Clubs own a summer camp which offers an outing to 100 girls at a time at a charge of \$3.75 to \$4.75 a week. These prices pay all running expenses for club and camp, the expert business management being in the hand of an unpaid board.

Mt. Holyoke College has abolished the compulsory housework on the part of the students which for 75 years has distinguished its management. The system which fitted so well to rural New England conditions two generations ago, is felt to be now out of date. The general tuition fee will be raised, but opportunities to earn money in the new coöperative houses in library, laboratory and secretarial work will be greatly increased for those who need it.

The Home Economics Department of the General Federation of Women's Clubs reports through its chairman, Miss Helen Louise Johnson, that a Home Economics Department has been formed in the Alabama Federation. Nevada alone is yet to be brought into the fold.

The College of Agriculture of the University of Wisconsin singles out each year for honorary recognition three or four men who have contributed eminent services to agriculture. This year Arthur Broughton, one of the foremost flock-masters of the Middle West, John M. True, for several years Secretary of the Wisconsin State Board of Agriculture, and J. H. Hale, of Connecticut, the "peach king of America," will be honored for the work they have done in agricultural lines.

When will the good housekeeper receive an honorary degree?

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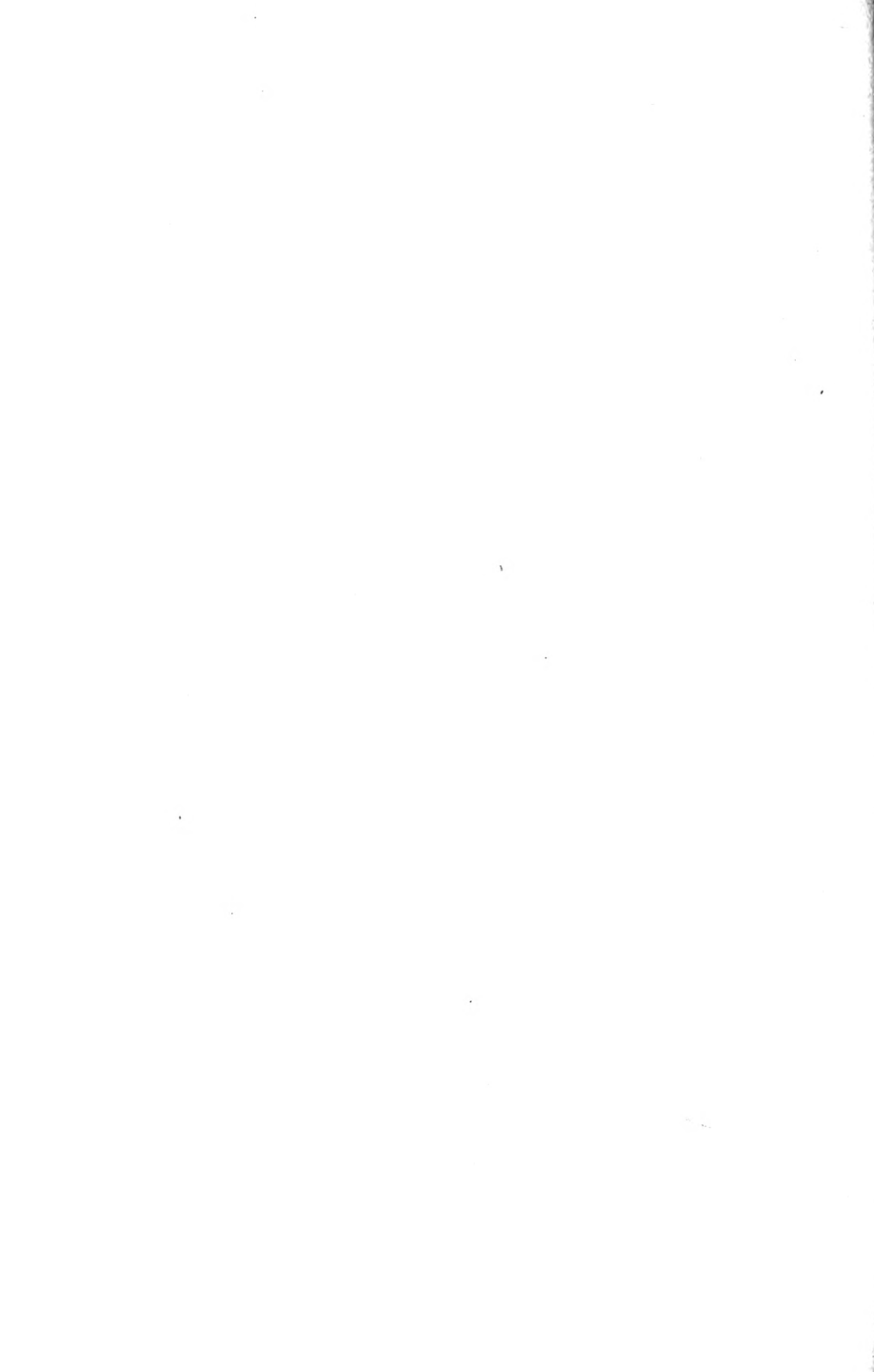
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